NDT

DN-E/DN-M/DN-S Series DVR

INSTRUCTION MANUAL (ND_Ver. 1.0)

H.264 Video Compression

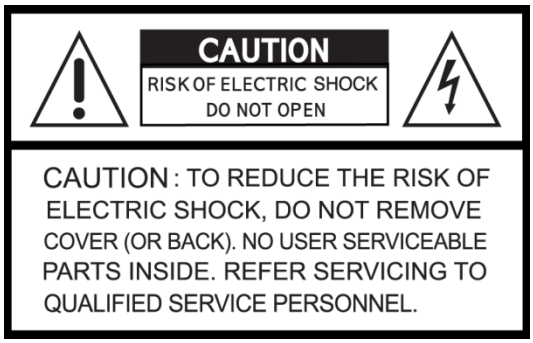
Digital Video Recorder

About this user guide

Before installing and using this unit, please read this user guide carefully.

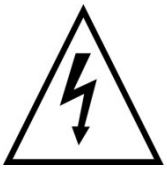
Be sure to keep it handy for later reference.

Safety Precautions


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Explanation of Graphical Symbols

This symbol indicates the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



This symbol indicates the presence of uninsulated ”dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

WARNING

To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

CAUTION

Changes or modifications not expressly approved by the manufacturer may void the user’s authority to operate this equipment.

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Discard used batteries according to the manufacturer’s instructions.

These precautions must be followed for safety reasons.

Warning

- Do not use if the unit emits smoke, strange sounds are heard, or odor is emitted.
- Make sure the power cable is not damaged.
- Make sure there is no dust accumulation on the power plug or the outlet.
- Disassembly prohibited
- Do not place any foreign objects inside the unit.
- Do not place a container holding water or other liquids above the unit when it is connected to power.
- Do not allow the unit to get wet.
- Do not use during thunder/thunder storms.
- Do not place in an unstable position.
- Do not expose to shock or vibration.
- Do not use this unit in areas where it is exposed to the possibility of explosion.
- For pluggable equipment, the socket-outlet shell be installed near the equipment and shall be easily accessible.

Caution

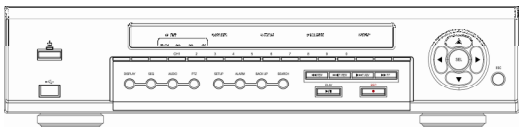
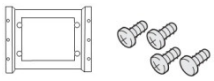
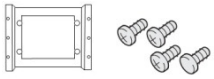
- Do not pull on the power cable when removing the power plug from the outlet.
- Do not touch the power plug with wet hands.
- Do not sit on.
- Make sure the cables are connected properly.
- Do not place heavy objects on connected units.
- Never move this unit while the power is turned on.
- Remove the power plug from the outlet when the unit is going to remain unused for long periods of time.
- Do not block the cooling fans or air ducts.
- Do not expose to extreme temperatures or humidity changes.
- The Socket Outlet shall be installed near the equipment and shall be easily accessible
- Risk of explosion if battery is replaced by an incorrect type
- Dispose of used batteries according to the instructions

Warning

Installation and servicing should be performed only by qualified and experienced personnel.
Turn off the power of the DVR when connecting cameras, audio or sensor cables.
The manufacturer is not responsible for any damage caused by improper use of the product or failure to follow instructions for the product.
The manufacturer is not responsible for any problems caused by or resulting from the user physically opening the DVR for examination or attempting to fix the unit. The manufacturer may not be held liable for any issues with the unit if the warranty seal is removed.

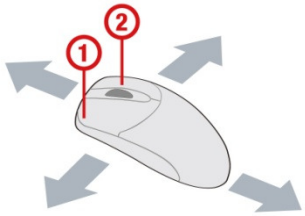
Product Components

The package contains the main unit and its components as specified below. When you purchase the unit, Please check to ensure the components specified below are included.

DVR Set	
DVD-RW (option)	
Client Software CD, User Guide	
Remote Control , Battery1.5V, Mouse	
DVD-RW data cable (Refer to below table)	
HDD data and power cable (Refer to below table)	
HDD mounting bracket & Screw (Refer to below table)	
DVD-RW mounting bracket & Screw (Refer to below table)	
HDD & DVD-RW fixing screw (Refer to below table)	
Audio Cable (Optional Model)	
Power Cable (110V or 220V)(1EA)	

Items	8/16CH DVR	
	DVD-RW version	Basic version
	1ODD+2HDD	4HDD
HDD data cable	2	4
HDD power cable	X	X
DVD-RW data cable	1	X
HDD mounting bracket (for 2HDD)	1	2
HDD & Grommet fixing screw	8	16
HDD Grommet	8	16
DVD-RW mounting bracket	1	X
DVD-RW mounting bracket screw	4	X
HDD/DVD-RW bracket fixing screw	1	2

Basic function of the MOUSE

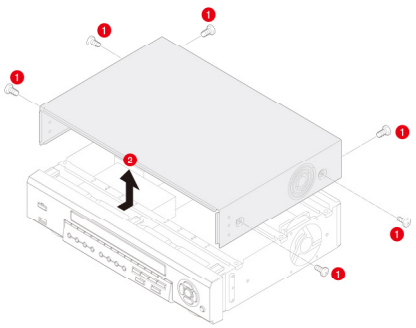


① : Left button: SELECT function

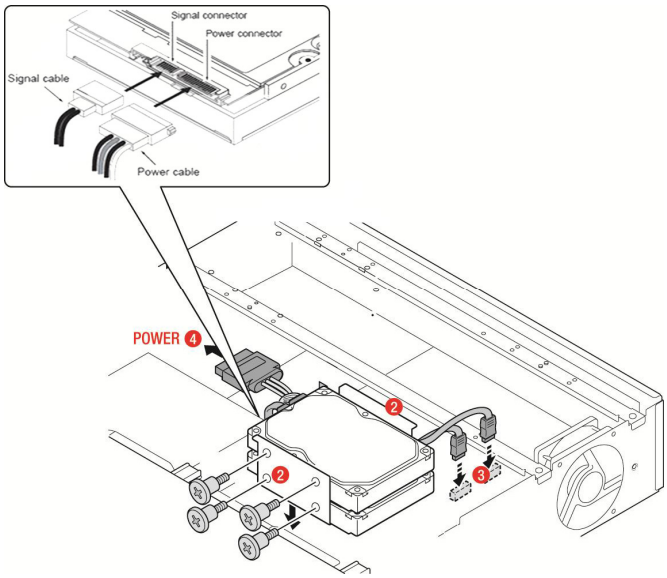
② : Wheel: MOVEMENT function on a drop-down menu

Mounting the HARD DISK

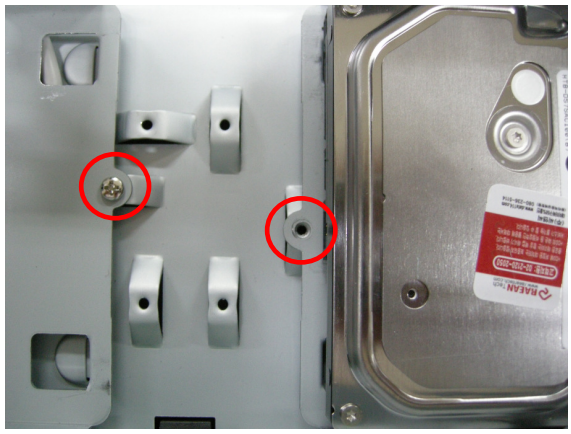
1. Unfasten the cover of the unit.



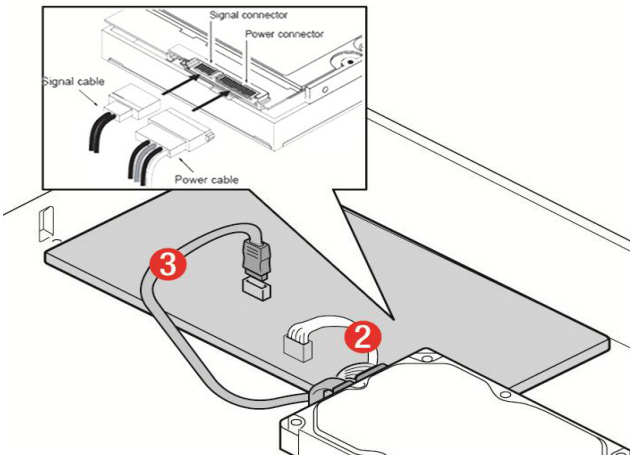
2. Fix the supplied HDD mounting bracket to the hard disk using the supplied mounting bracket screws.

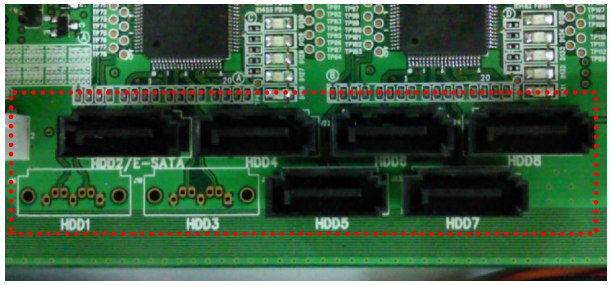


3. Insert the HDD bracket to the hole and fix the screw.



4. Connect the supplied SATA cable and power cable to the hard disk.





NOTE) HDD1 and HDD3 are for eSATA and others are for internal HDDs. HDDs are distingushed Master and Slave. The Master HDD contains all information of HDDs installed in the system. The DVR can have only one Master HDD. Note that the DVR does not work properly without Master HDD. The Slave HDDs can be freely added, removed and moved to other port. The ODD can be installed to one of ports.

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1. Name, Function and Connection

1-1. Front Panel

The following information will help you to operate the front panel controls.

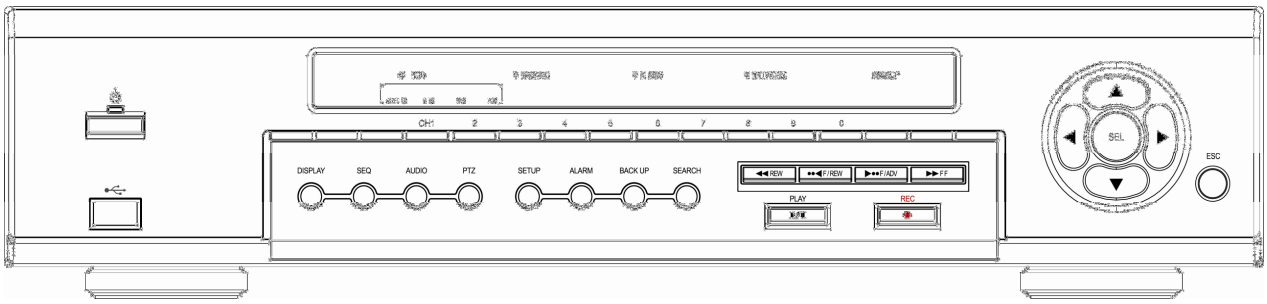


Figure 2.1.1. Front panel (DN-M / DN-S)

Table2.1.1. Indication lamps

NO.	Name	Description
A	**CH1~16**	Indicating that the channel is being recorded.
B	**HDD**	Indicating that the system is accessing the hard disk.
C	**RECORD**	Indicating that the system is recording video data.
D	**ALARM**	Indicating that when sensor(s) is/are triggered or motion is detected.
E	**NETWORK**	Indicating that when Network client connects through the network.
F	**BACKUP**	Indicating that USB or DVD-RW storage device is stored images or video.

Table 2.1.2. Front panel buttons

NO	Name	Description
1	**POWER**	POWER ON/ OFF
2	**CHANNEL**	Channel keys. For channel 10, press the 0 key. For channel 11, press the +10 and 1 key. For channel 16, press the +10 and 6 key.
3	**REWIND**	Press to rewind the footage in playback mode.
4	**AUDIO**	Press to select audio mode such as SINGLE, MIX and MUTE. MUTE- All of 4 channels. SINGLE- Highlighted channel only. MIX- All of 4 channels.
4	**JUMP/BACK WARD**	Jump/Step backward. In playback mode, the playback position moves 60 seconds backward.
5	**FORWARD**	Press to fast forward the footage in playback mode.
6	**ALARM**	Press to enable/disable ALARM operation.
6	**JUMP/FORA RD**	Jump/Step forward. In playback mode, the playback position moves 60 seconds forward.
7	**REC**	Press to start or stop manual recording.
8	**SEARCH**	Press to go to SEARCH menu in live display mode.

8	**PLAY**	Press to play/pause the footage in playback mode.
9	**SEQ.**	Enable/disable the automatic sequence of display of channels in full screen, quad, 9-split display mode.
10	**PTZ**	Press to control Pan/Tilt/Zoom operations.
11	**SETUP**	Press to enter SETUP menu.
12	**BACKUP**	Press to capture video in jpeg format in live or playback mode.
13	◀(**LEFT)**	Press to move left or to change the values in Setup mode. It is also used as the number 4 when entering password.
14	▲(**UP)**	Press to move up the menu in Setup mode. It is also used as the number 1 when entering password.
15	▶(**RIGHT)**	Press to move right or to change the values in Setup mode. It is also used as the number 2 when entering password.
16	▼(**DOWN)**	Press to move down the menu in Setup mode. It is also used as the number 3 when entering password.
17	SEL	Press to select desired menu item or to store the setup value.
18	**ESC**	Press for temporary storage of the changed value or to return to the previous menu screen.
19	**OPEN /CLOSE**	To open and close the insert tray, press the button.
20	**USB Port**	To archive still-image or video into a USB memory or upgrade firmware with USB memory stick, connect a USB memory to the USB terminal on the front panel.

1-2. Rear Panel

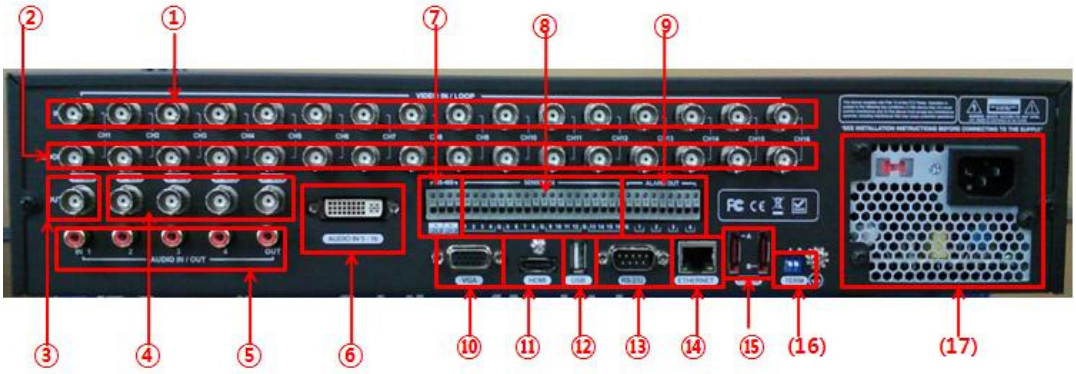


Figure 2.2.1. Rear Panel (OPTIONAL For different model)

Table 2.2.1. Rear panel connections

NO	Connection	Purpose
1	**VIDEO IN**	8(for 8ch) and 16(for 16ch) BNC connectors for video input. (NTSC/PAL)
2	**LOOP**	8(for 8ch) and 16(for 16ch) BNC connectors for video output. (Loop Back)
3	**CVBS**	Composite video output in NTSC or PAL format.
4	**SPOT**	2(for 8ch) and 4(for 16ch) composite video outputs for spot monitoring.
5	**AUDIO IN**	4 connectors for audio input. (No. 1~4)
	AUDIO OUT	1 connector for audio output.
6	**AUDIO IN**	Connector for audio input cable. (No. 5~16)
7	**RS-485**	1st and 2nd ports for RS-485. (for camera and controller)
8	**SENSOR IN**	8(for 8ch) and 16(for 16ch) connectors for sensor device connection.
9	**ALARM OUT**	2(for 8ch) and 4(for 16ch) connectors for alarm device connection. Provides simple On/Off switching by using relay. 0.5A/125V, 1A/30V
10	**VGA**	Connector for VGA monitor.
11	**HDMI OUT**	Main Video Output (1280x720P)
12	**USB Port**	Connector for Mouse or Backup
13	**RS-232**	POS Interface (TBD).
14	**ETHERNET**	RJ-45 connector for network function
15	**E-SATA**	To archive still-image or video into a External Storage HDD . RAID Units to be available in the future
16	**TERMINATE**	RS-485 termination switch for 1st and 2nd.
17	**POWER SOCKET**	Connect for AC110V~250V

1-3. Remote control

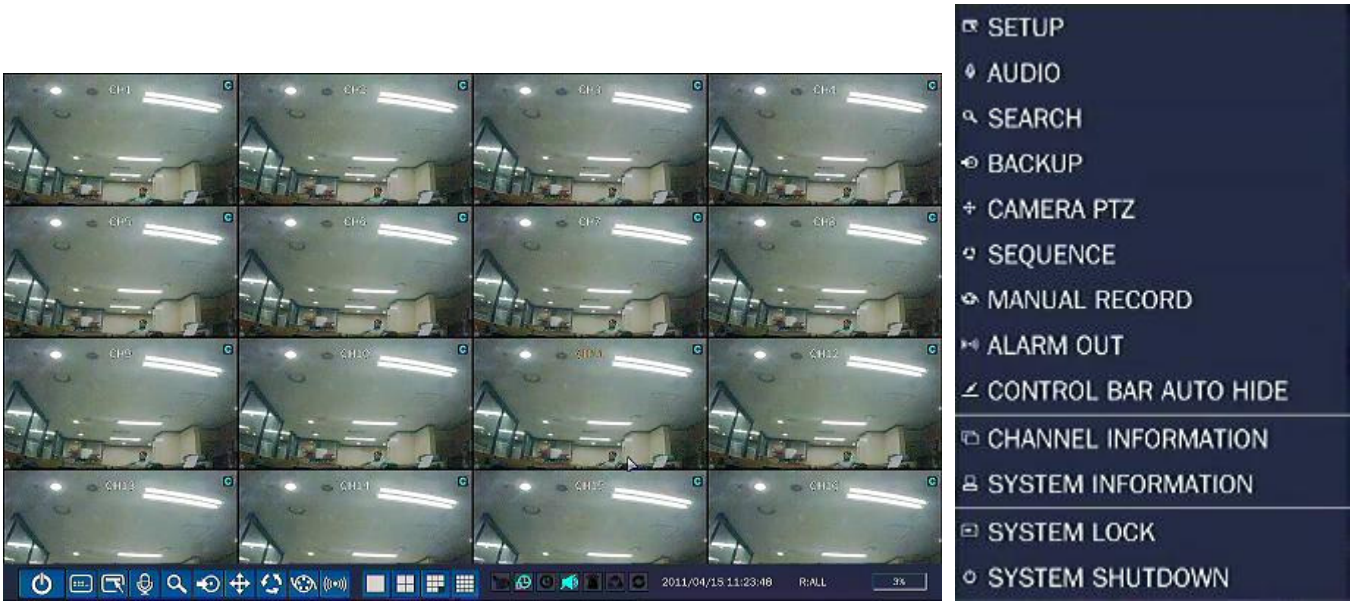
RECORD	Manual recording
DISPLAY	Display of Full, Quad,9 or 16 split screen
F/REW	Jump 60 seconds backward
PLAY/PAUSE	Play/Pause
F/ADV	Jump 60 seconds forward
REW	Rewind
BACKUP	Backup still or video data
FF	Fast Forward
ALARM	Disable alarm operation
SETUP	Setup menu screen
ID	DVR ID (ID Button + DVR ID number)
AUDIO	Mute, Single(1CH), MIX(4CH)
LOCK	Lock all of key functions
SEQ	Sequence of Full or Quad view
PTZ	PTZ menu screen
SEARCH	Search menu screen
DIRECTION KEY	Direction key
SELECT	Select or display of split screen
ESC	Esc
NUMBER 1~9,0	Channel 1 to 9 / 10CH->press 0
+10	Channel 11 to16 11CH->press +10 and number 1 16CH->press +10 and number 6

2. Setting up the DVR

The following sections detail the initial setup of a DVR.

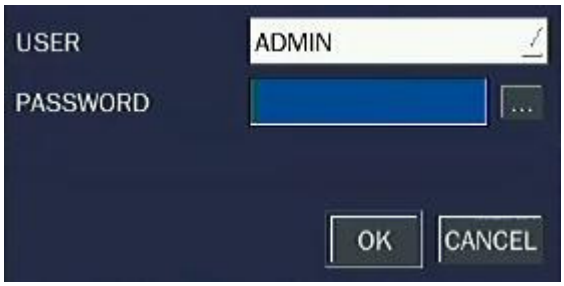
2-1. Setup – Main Screen

To enter the setup menu, select MENU and SETUP on the screen using the mouse or press the SETUP



button on the front panel. Then select a user type. User can select one of user types (ADMIN, USER1, USER2, USER3) using the control button (◀ ▲ ▶ ▼) on the front panel and press SEL button.

Input the password by front key panel, mouse or remote controller.



Use the Virtual Keyboard when you use front key and mouse. The factory default password is 1111.

It is highly recommended to assign a new password to protect the system. User can assign a new password in SECURITY setup menu.

Table 2.1.1. Setup Menu List

- DISPLAY
  - OSD
  - OSD CONTRAST
  - SEQUENCE
  - SEQ-DWELL TIME
  - CHANNEL
    - NAME
    - COVERT
    - BRIGHTNESS
    - CONTRAST
    - HUE
    - SATURATION
  - VIDEO OPTION (HDMI/VGA)
  - VIDEO OPTION (CVBS UNDER SCAN)
- RECORD
  - CHANNEL
    - RESOLUTION
    - FRAME RATE
    - QUALITY
    - RECORDING
    - SENSOR RECORDING
    - PRE RECORD
    - POST EVENT RECORD
    - AUDIO
    - SCHEDULE
- DEVICE
  - ALARM OUT
    - TYPE
  - CONTROLLER & PTZ
  - SPOT OUT
  - CHANNEL
    - MOTION ZONE
    - MOTION SENSITIVITY
  - KEY TONE
  - REMOTE CONTROL ID

  - SENSOR
    - TYPE
- STORAGE
  - OVERWRITE
  - DISK FORMAT
  - DISK INFO
  - RECORDING LIMIT
    - RECORDING LIMIT DAYS
  - S.M.A.R.T
- SYSTEM
  - DVR-ID
  - DESCRIPTION
  - LANGUAGE
  - DATE FORMAT
  - SET DATE & TIME
  - CLIENT ACCESS
  - NTP
  - SEND EMAIL
- SECURITY
  - USER AUTHENTICATION
  - USER PASSOWRD
  - AUTHORITY OF PLAYBACK
- NETWORK
  - PORT
  - WEB PORT
  - NETWORK TYPE (DHCP, STATIC)
  - DNS (PRIMARY)
  - DNS (SECONDARY)
  - DDNS
  - NETWORK STREAM
- CONFIG
  - SAVE SETUP TO A USB
  - LOAD SETUP FROM A USB
  - LOAD DEFAULT
  - LOAD FACTORY DEFAULT

2-2. Setup – Display Mode

Press the SETUP button and enter the password. The setup menu is displayed as picture below. Select DISPLAY icon and press SEL button to enter the setup menu item. Navigate through the menu items using the control button (◀ ▲ ▶ ▼) and change the value of the menu item using the control button

(◄ ▲ ► ▼). To return to setup menu screen, press the ESC button.

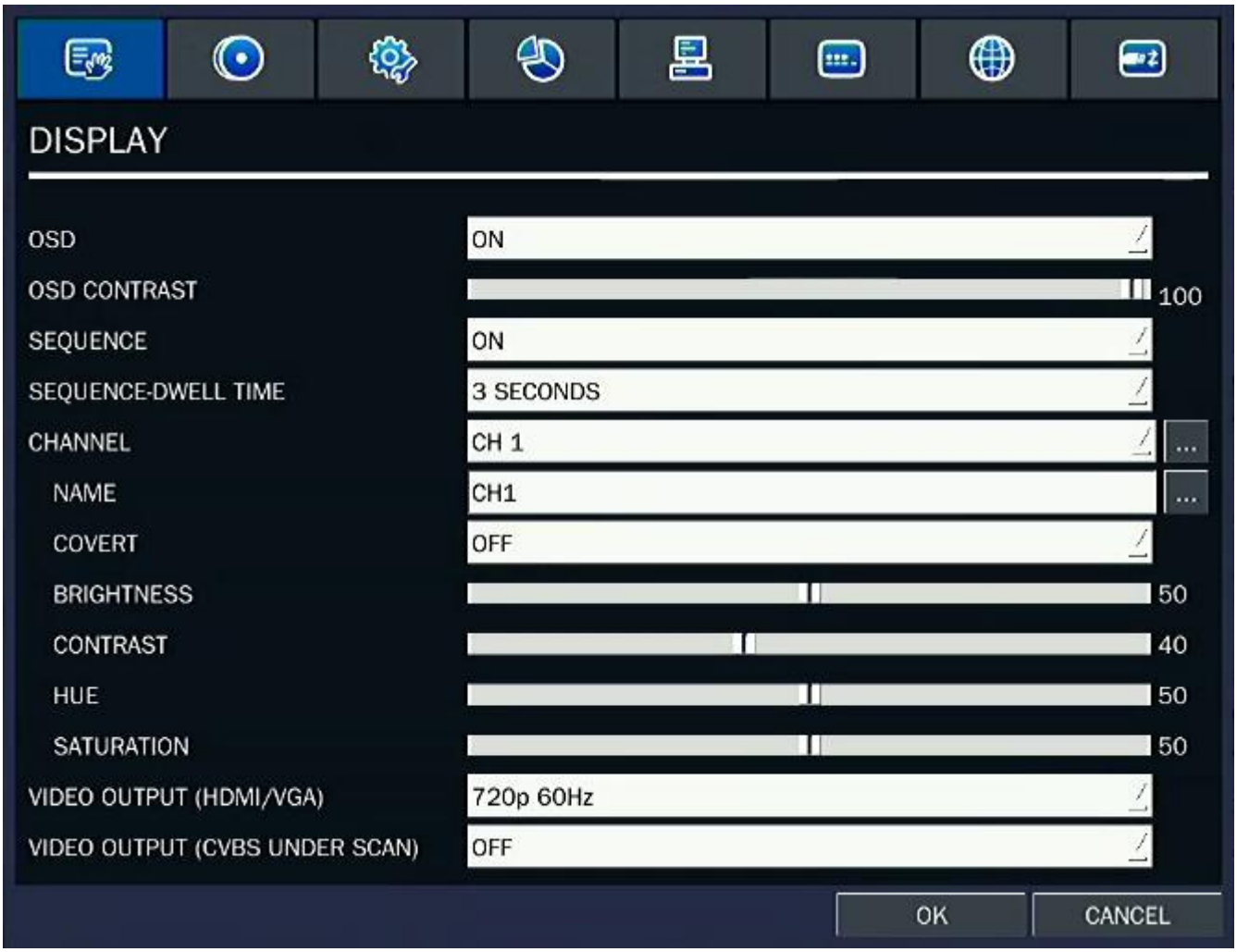


Figure 2.2.1. Display mode setup screen

Table 2.2.1. Menu items in DISPLAY mode setup

Item	Description
OSD	Enable/disable on-screen-display. Select ON: show it on the screen, Select OFF: Disappear on the screen.
OSD CONTRAST	Set the visibility level of the On Screen Display (OSD).(0-100)
SEQUENCE	Enable/disable sequential display of video in full screen mode.
SEQ-DWELL TIME	Set the dwell time of each, single channel display in sequential display mode (3~60seconds)
CHANNEL	Select a channel for applying the following settings using the control button (◄ ▲ ► ▼). Press SEL button to change the channel.
NAME	Set the channel name. Press SEL button and set the channel name and select OK using the control button (◄ ▲ ► ▼).
COVERT	Enable/disable display of the video channel in live display mode.
BRIGHTNESS	Change the brightness value of the specified channel.(0-100)

CONTRAST	Change the contrast value of the specified channel. (0-100)
HUE	Change the hue value of the specified channel. (0-100)
SATURATION	Change the saturation value of the specified channel. (0-100)
VIDEO OUTPUT (HDMI/VGA)	Select a video output type for HDMI/VGA. (720p 50Hz, 720p 60Hz, 1080i 50Hz, 1080i 60Hz, 1080p 50Hz, 1080p 60Hz). Default value is 720p 60Hz.
VIDEO OUTPUT (CVBS Under Scan)	Adjust by selecting Mode1 or Mode2 when the video output is CVBS mode.

2-3. Setup – Recording Mode

Press the SETUP button and enter the password. The setup menu is displayed as picture below. Select RECORD icon and press SEL button to enter the setup menu item. Navigate through the menu items using the control button (◀ ▲ ▶ ▼) and change the value of the menu item using the control button (◀ ▲ ▶ ▼). To return to setup menu screen, press the ESC button.

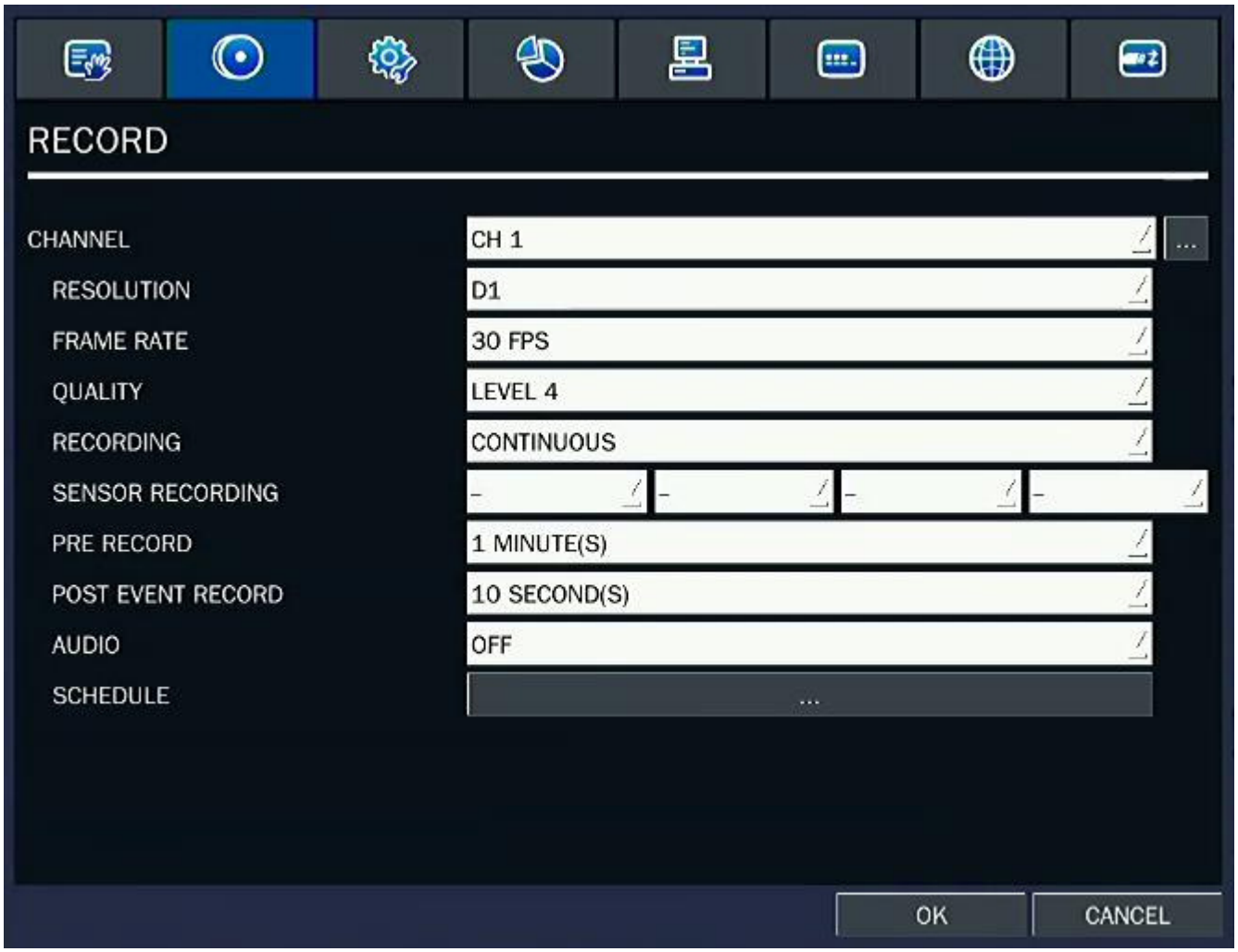
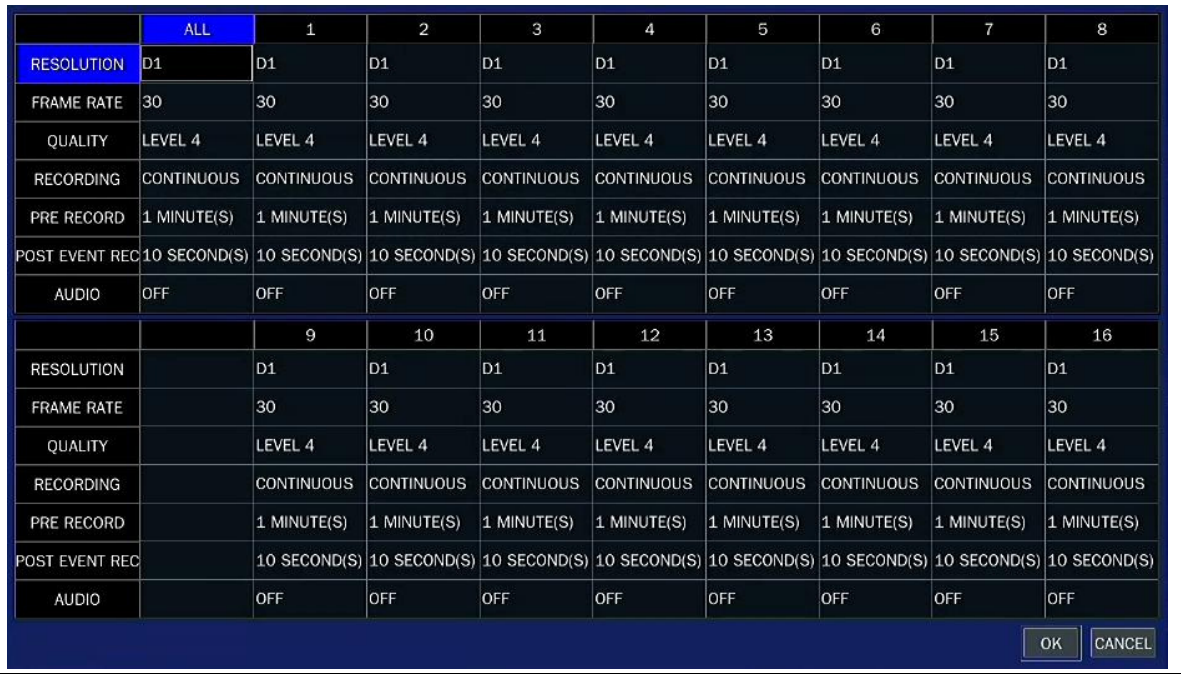


Figure 2.3.1. Recording mode setup screen

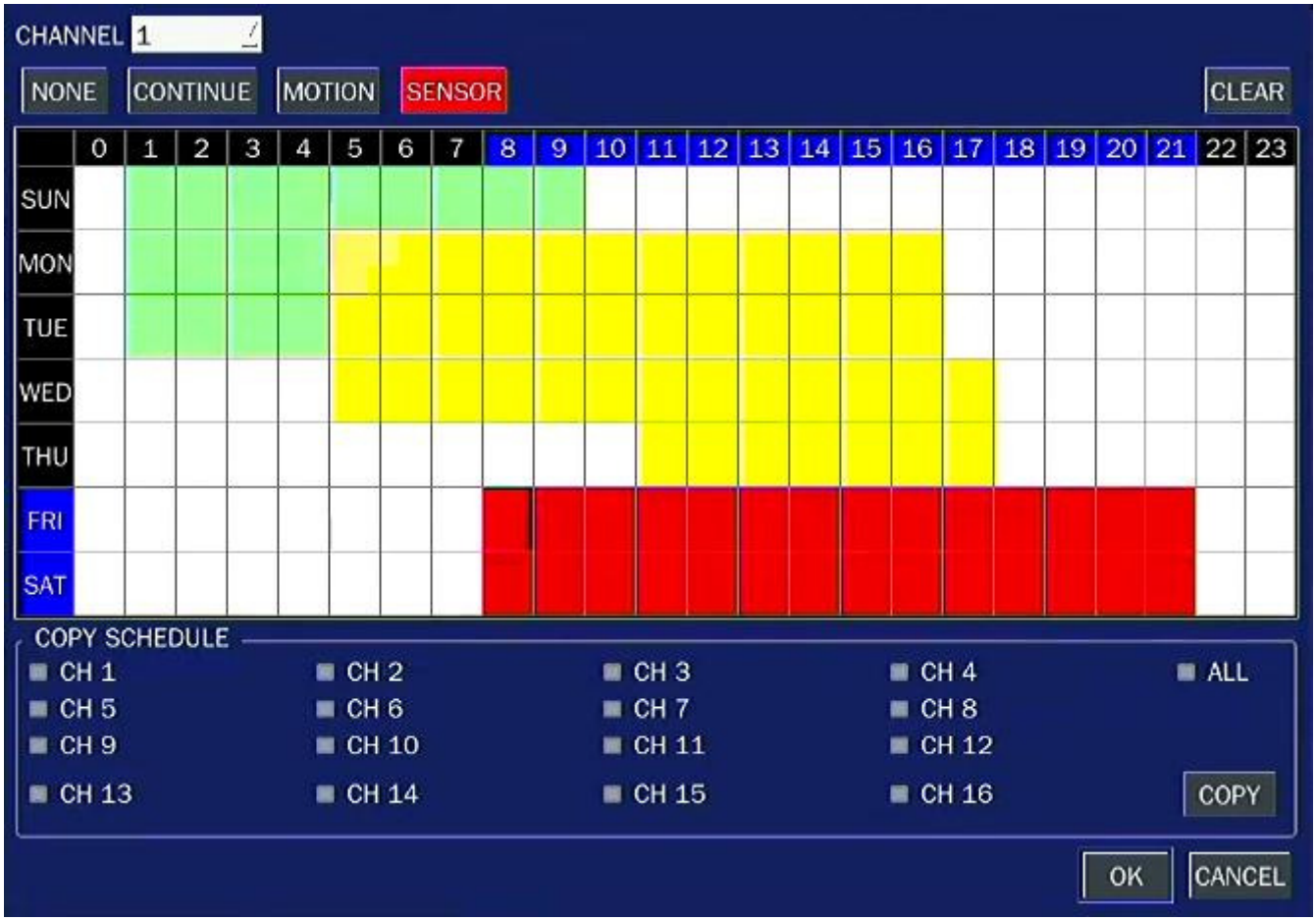
Table 2.3.1. Menu items in Recording mode setup

Menu item	Description
CHANNEL	Select a channel for applying the following settings using the control button (◀ ▲ ▶ ▼). Press SEL button to change the setting value of all channels at once. Once you select an item, then press SEL to set value for all channels. Use virtual keyboard for all setting on one screen as you want as bellow picture. 
RESOLUTION	Set the resolution for the specified channel. D1, Half D1 and CIF
FRAME RATE	Set the frame rate for the specified channel. The sum of the frame rate values from each channel cannot exceed the maximum frame rates for a specific recording resolution. **Typical values of the maximum frame rate for video are** **240/200 fps in case of 8ch and 480/400fps in case of 16ch.**
QUALITY	Select the recording quality for the specified channel. Options are: LEVEL 1,2,3,4 or 5. LEVEL 1 is lowest quality and LEVEL 5 is highest quality.
RECORDING	Assign the recording mode for each channel. Options are: Continuous, By Motion, By Sensor, By Schedule or Disable.
SENSOR RECORDING	Enable setting up to 4 sensors for the specified channel using the control button (◀ ▲ ▶ ▼).
PRE RECORD	Enable/disable pre-event recording. Pre-event recording time is 15 seconds to 20 minutes(Selectable)
POST EVENT RECORD	Set the post event recording time duration for the specified channel. (10-60 seconds)
AUDIO	Enable/disable audio recording for the specified channel.
SCHEDULE	Set the recording schedule. Press SEL to go to schedule setup screen.

2-3-1. Recording Schedules

To setup a recording schedule, select SCHEDULE in the RECORD menu. Navigate through the items using the control button (◀ ▲ ▶ ▼).

Once the channel 1 is selected, SCHEDULE-CH1 screen is displayed. Select ALL or each day using the control button (◀ ▲ ▶ ▼) and set the recording mode using the SEL button repeatedly



.

Figure 2.3.2. Schedule recording setup screen

C: CONTINUOUS recording, when you select the color will change to Blue Color

M: MOTION recording, when you select the color will change to Yellow Color

S: SENSOR recording, when you select the color will change to Red Color

−: Does not record

[**ALL**]: Move the cursor to ALL and select a recording mode C,M or S using the SEL button to set the same setting for every day.

[**SUN to SAT**]: Move the cursor to SUN to SAT and select a recording mode C,M or S using the SEL button to set the same setting for the whole day.

[**Vertical Bar** " | "]: Move the cursor to ALL and move the cursor to the specific time using the control button (◀ ▲ ▶ ▼). And select a recording mode C,M or S using the SEL button to set the same setting.

[**SEL**]: The recording mode can be selected by pressing repeatedly the SEL button.

[**COPY FROM] [COPY TO]**: Set the channel 1 schedule and select COPY TO using the control button (◀ ▲ ▶ ▼), select CH2 using the control button (◀ ▲ ▶ ▼) and press the SEL button. Then the CH1

schedule is copied to CH2.
To return to setup menu screen, press the ESC button.

The setting of the schedule recording is determined by the admin only.

2-4. Setup – Device Mode

Press the SETUP button and enter the password. The setup menu is displayed as picture below. Select DEVICE icon and press SEL button to enter the setup menu item. Navigate through the menu items using the control button (◀ ▲ ▶ ▼) and change the value of the menu item using the control button (◀ ▲ ▶ ▼).To return to setup menu screen, press the ESC button.

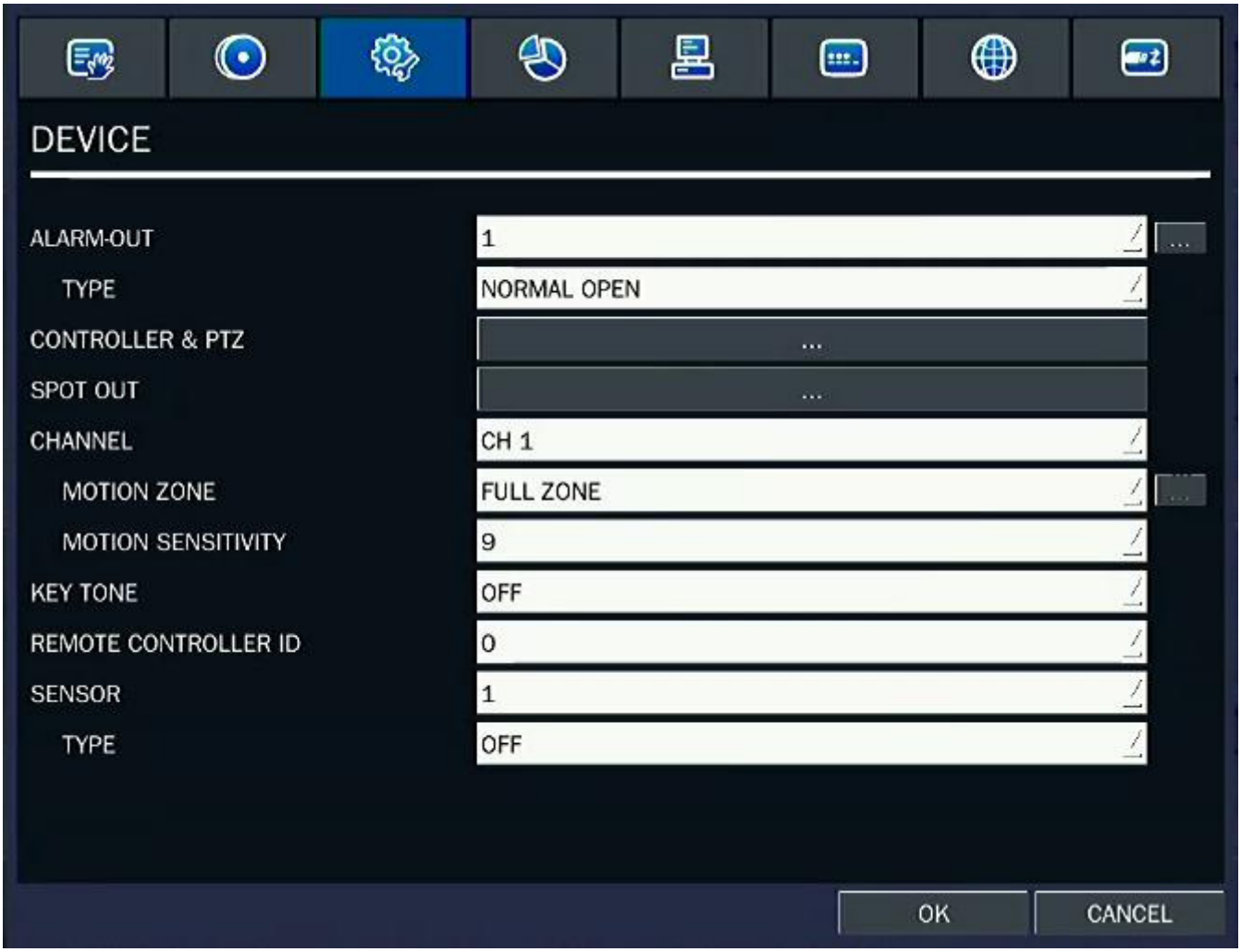


Figure 2.4.1. Device mode setup screen

Table 2.4.1. Menu items in Device Setup screen

Item		Description
ALARM OUT		Set the sensor, motion, and video loss for each alarm.
	TYPE	After setting Normal Close, the alarm out would be worked through the connected device when the system is power off.

	The default value is Normal Open.
CONTROLLER & PTZ	Set the Controller and PTZ camera speed, number, type and ID.
SPOT OUT	
CHANNEL	Select specified channel for motion zone setup.
MOTION ZONE	Select either Full Zone or Partial Zone for motion sensing.
MOTION SENSITIVITY	Set the motion sensitivity for the specified channel. Control the motion sensitivity from 1 to 9.
KEY TONE	Enable/disable key tone.
REMOTE CONTROL ID	Select an ID of remote control. 1. Select ID. 2. Press the same number as ID set in DVR on a remote control. 3. Then icon will be displayed on Live screen of DVR that respond to the remote control. The options are from 00 to 99
SENSOR	Select sensor NO from 1 to 4,9,16.
TYPE	Set the type of sensor for the specified channel. Options are: OFF, N/O (normal open), and N/C (normal closed).

2-4-1. ALARM-OUT

Figure 2.4.2. ALARM-OUT setup screen

Table 2.4.2. Menu item in ALARM-OUT Setup screen

Item	Description
ALARM OUT	Select an alarm out number. Available NO: 8CH(4), 16CH(4)
SENSOR IN	Enable setting up to 4 sensors of 8/16 sensors for each alarm.
MOTION ON	Enable setting up to 4 cameras of 8/16 cameras for each alarm.
VIDEO LOSS ON	Enable setting up to 4 cameras of 8/16 cameras for each alarm.

ALARM DURATION	Set the alarm dwell time from 5 to 60 seconds.
ERROR ALARM	Set the error type for the alarm activation. The options are OFF, ALL, HDD ERROR and VIDEO LOSS.

2-4-2 Controller & PTZ Setup

To control the controller and PTZ functions of the camera, connect a controller to the RS-485 port.

① Connect the RS-485 cables of Controller and PTZ camera to the RS-485 port on the rear panel.
② Press SEL button or double click to enter the menu. Then Controller and PTZ menu screen is displayed.

Figure 2.4.3. Controller and PTZ Control Setup Screen

Note: For speed dome cameras that support RS-485, connect them directly to the RS-485 port. If the camera is controlled with RS-232C, use an RS-485 to RS-232C signal converter.

On the Controller and PTZ control setup screen, you can select or set the protocol type of the camera that is the same as the one installed on the site. If the camera has a specific camera ID, select the camera ID using the control button (◀ ▲ ▶ ▼).
The following options are available on the Controller and PTZ setup screen.
CHANNEL (channel number that the Controller and PTZ is connected to)
NAME (protocol type)
SPEED (19200, 14400, 9600, 4800, 2400)
ID (0-63)

2-4-3. Spot Out

Item	Description
SPOT OUT	Spot Out 1: from 1 channel to 4 channel Spot Out 2: from 5 channel to 8 channel Spot Out 3: from 9 channel to 12 channel Spot Out 4: from 13 channel to 16 channel
SPOT TYPE	Select Full screen or Quad screen mode.
SPOT ON EVENT	Enable/Disable display of the channel when an event is active.
SPOT EVENT DWELL TIME	Set the dwell time for the display of the event activated channel. (3-10sec)
SEQUENCE	Enable/disable sequential display of spot channel in full screen. If select ON, spot channel selection screen is displayed.
SEQ-DWEL TIME	Set the dwell time for the spot channel display.(3-10sec)
SPOT CHANNEL	Select a channel for spot monitoring using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control and press OK button.

2-4-4. Motion Zone Setup

Select MOTION ZONE using the control button (◀ ▲ ▶ ▼) and select either PARTIAL ZONE or FULL ZONE using the control button (◀ ▲ ▶ ▼). And press the SEL button.

If FULL ZONE is selected, the motion setting screen is not displayed. Only set the level of sensitivity for MOTION SENSITIVITY.

FULL ZONE: The motion sensor is active on the whole screen.

PARTIAL ZONE: The motion sensor is active in the set detection frame.

Select the sensor detection position using the control button (◀ ▲ ▶ ▼) and press the SEL button.
Then the color of the position which is selected will be changed. Press ESC button to return to the DEVICE setup menu.

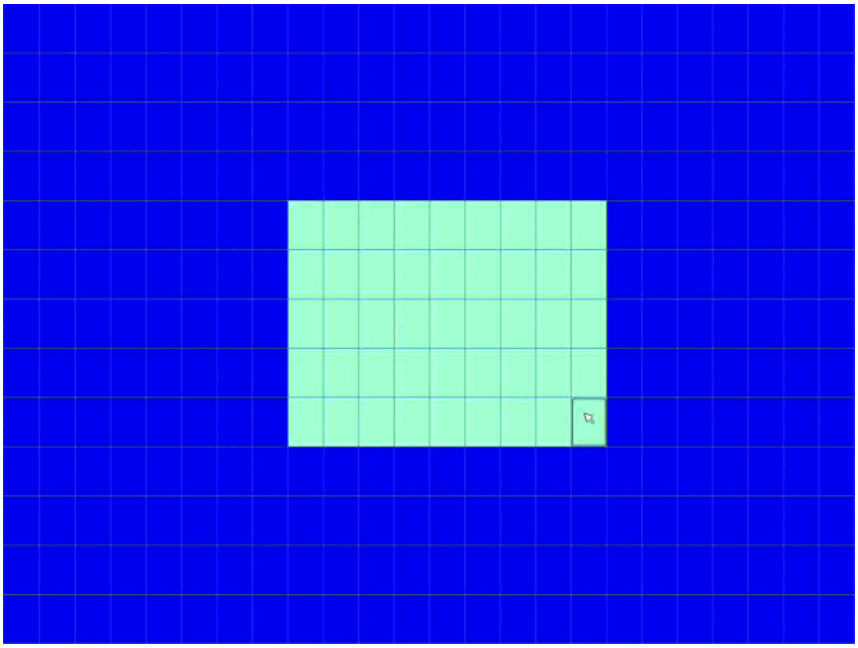


Figure 2.4.4. Motion Zone selection screen

2-5. Setup – Storage Mode

Press the SETUP button and enter the password. The setup menu is displayed as picture below. Select STORAGE icon and press SEL button to enter the setup menu item. Navigate through the menu items using the control button (◀ ▲ ▶ ▼) and change the value of the menu item using the control button (◀ ▲ ▶ ▼). To return to setup menu screen, press the ESC button.

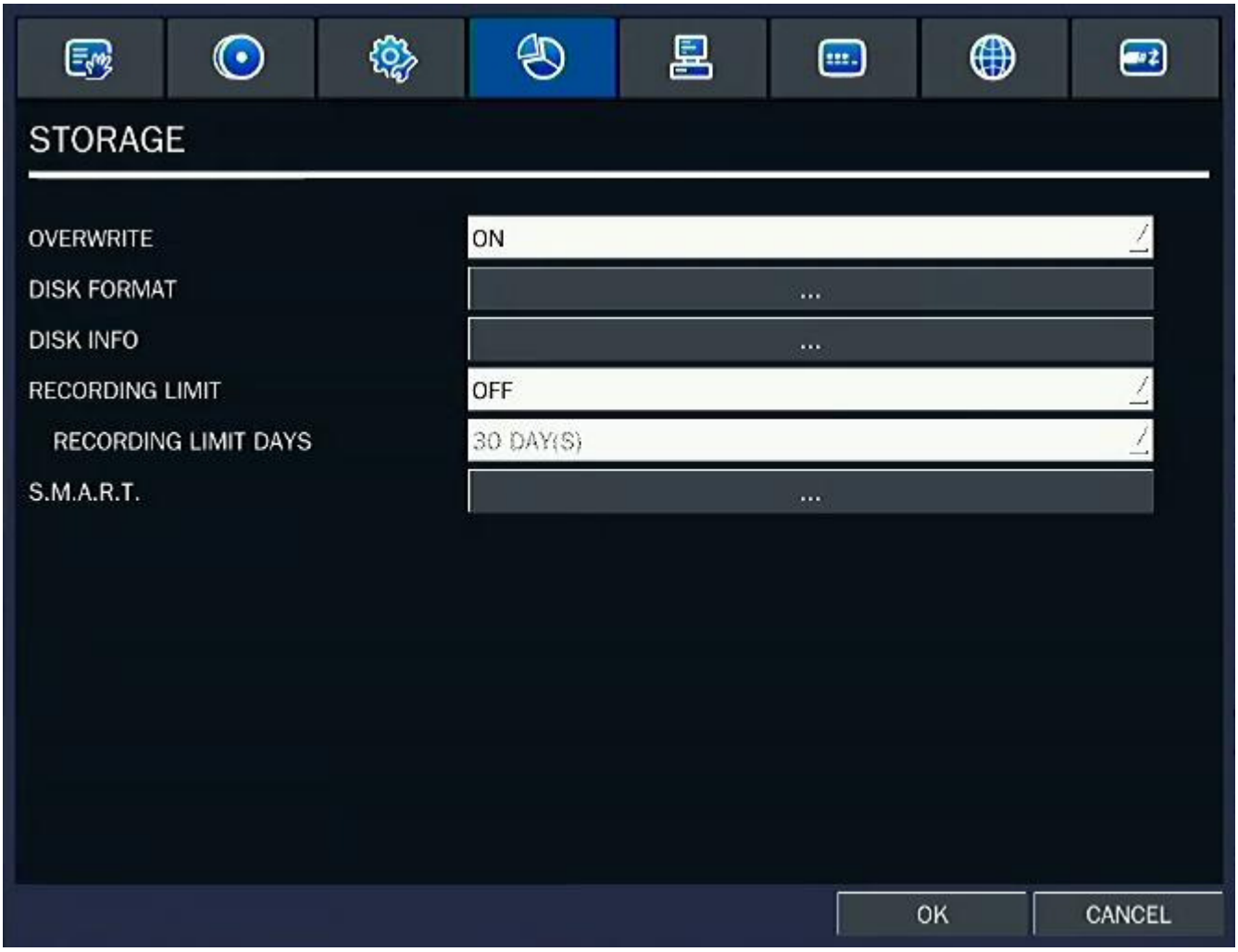
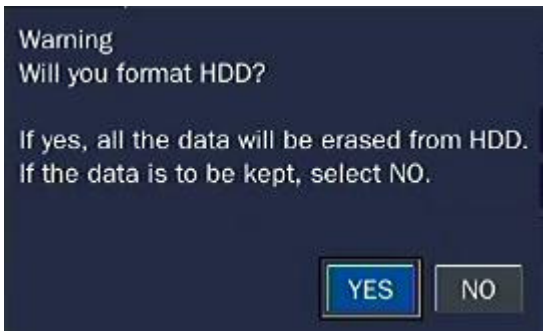
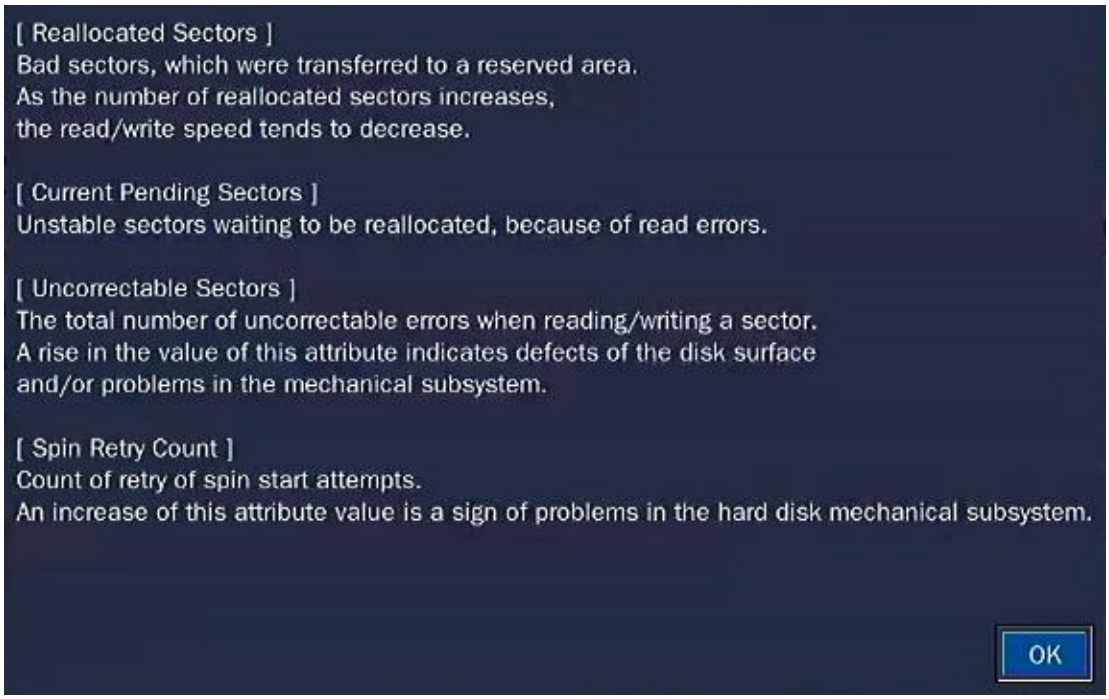


Figure 2.5.1. STORAGE setup screen

Table 2.5.1. Menu items in STORAGE Setup screen

Item	Description
OVERWRITE	When enabled, the DVR will continue recording and overwrite the oldest existing recorded data once the hard drive is full. When disabled, recording will stop once the hard drive is full.
DISK FORMAT	You will have an option YES or NO for the hard drive format. **Caution**: We recommend that you archive any data that you may need in the future before you format the hard drive. 

DISK INFO Hard drive information


[Reallocated Sectors]
Bad sectors, which were transferred to a reserved area.
As the number of reallocated sectors increases,
the read/write speed tends to decrease.
[Current Pending Sectors]
Unstable sectors waiting to be reallocated, because of read errors.
[Uncorrectable Sectors]
The total number of uncorrectable errors when reading/writing a sector.
A rise in the value of this attribute indicates defects of the disk surface
and/or problems in the mechanical subsystem.
[Spin Retry Count]
Count of retry of spin start attempts.
An increase of this attribute value is a sign of problems in the hard disk mechanical subsystem.
OK

RECORDING LIMIT	Enable/disable recording limit.
RECORDING LIMIT DAYS	Set the recording limit days.(1- 90 days) The data will remove by the hour.
S.M.A.R.T.	Set the alarm and buzzer by setting HDD temperature limit.

2-6. Setup – System Mode

Press the SETUP button and enter the password. The setup menu is displayed as picture below. Select SYSTEM icon and press SEL button to enter the menu item. Navigate through the menu items using the control button (◀ ▲ ▶ ▼) and change the value of the menu item using the control button (◀ ▲ ▶ ▼). To return to setup menu screen, press the ESC button.

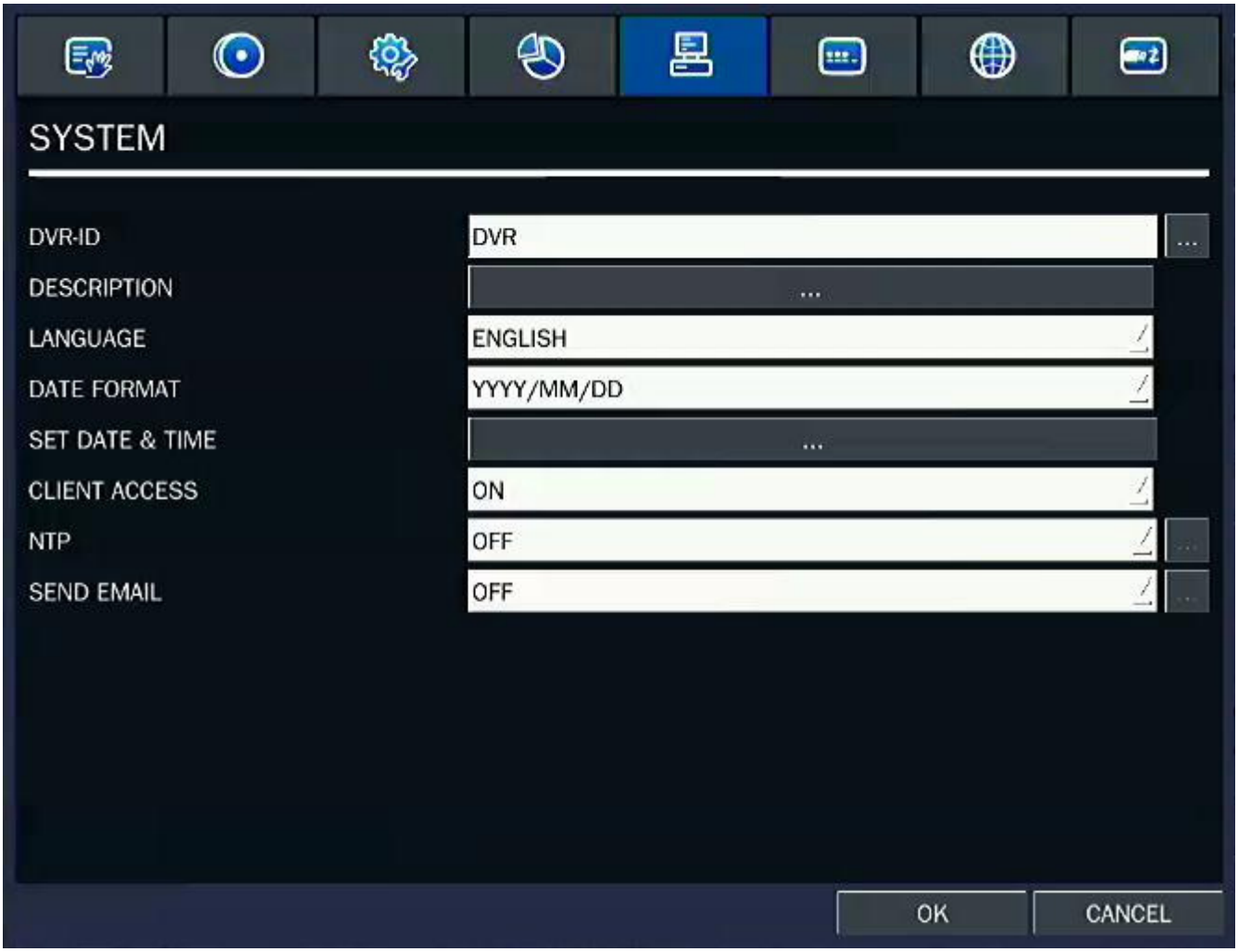
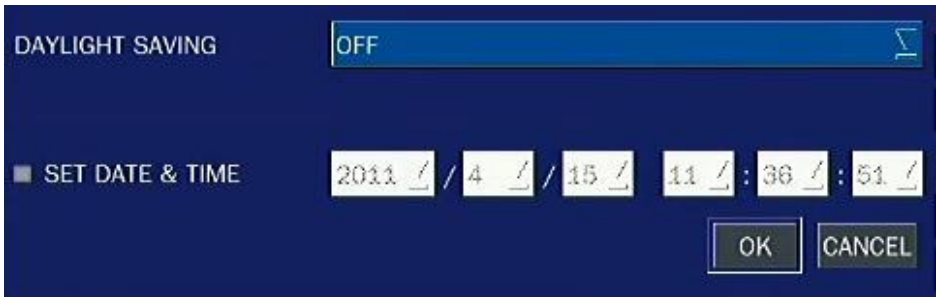


Figure 2.6.1. SYSTEM Setup Screen

Table 2.6.1. Menu items in SYSTEM Setup screen

Item	Description
DVR ID	Press the SEL button and select DVR ID using the control button (◀ ▲ ▶ ▼), and press SEL button. Press OK to apply the selected DVR ID. SPACE / Caps Lock(Select either Capital or Lower letter) BS(Back space: Erase previous character) / Clear(Erase all characters)
DESCRIPTION	Press SEL button to view system information. (Software version, Storage size, IP address and MAC address.)

LANGUAGE	Select the display language using the control button (◀ ▲ ▶ ▼). Once a language is selected, the display language changes.
DATE FORMAT	Select the date display format using the control button (◀ ▲ ▶ ▼). Options are: YYYY/MM/DD, MM/DD/YYYY, DD/MM/YYYY, YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY
SET DATE&TIME	Select the display date and time using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control and press OK button to set the present date and time.



DAY LIGHT SAVING

Select DAYLIGHT SAVING using the mouse and the control button (◀ ▲ ▶ ▼) on the remote control and select the appropriate daylight saving time zone.

If choosing EU or OTHERS, set the applicable conditions.

The options are:

OFF

USA

EU

OTHERS

1. OFF: Daylight saving is not set.
2. USA: Applies the USA daylight saving time.
3. EU: Applies the EU daylight saving time.
   - Select the GMT AREA using the control button (◀ ▲ ▶ ▼).
   - Set the time difference with the standard time using the control

button (◀ ▲ ▶ ▼).

4. OTHERS: If the time zone is neither USA nor E, set the start and end date of the daylight saving period.
   - Select BEGIN or END using the control button (◀ ▲ ▶ ▼) and press the SEL button.
   - Select the item using the control button (◀ ▲ ▶ ▼), select the setting value using the control button (◀ ▲ ▶ ▼) and press the ESC button to return to SET DATE & TIME setup menu.

CAUTION:

- Do not set the start time to 23:00 for DLS.
- DLS can't be applied if the date of BEGIN and END is the same.

CLIENT ACCESS Enable/Disable remote access through network client software.

NTP NTP is an abbreviation for Network Time Protocol, which is for synchronizing the clocks of computer systems over variable-latency data networks.

PRIMARY SNTP SERVER: Input the address of the primary NTP time server.

SECONDARY SNTP SERVER: Input the address of the secondary NTP time server.

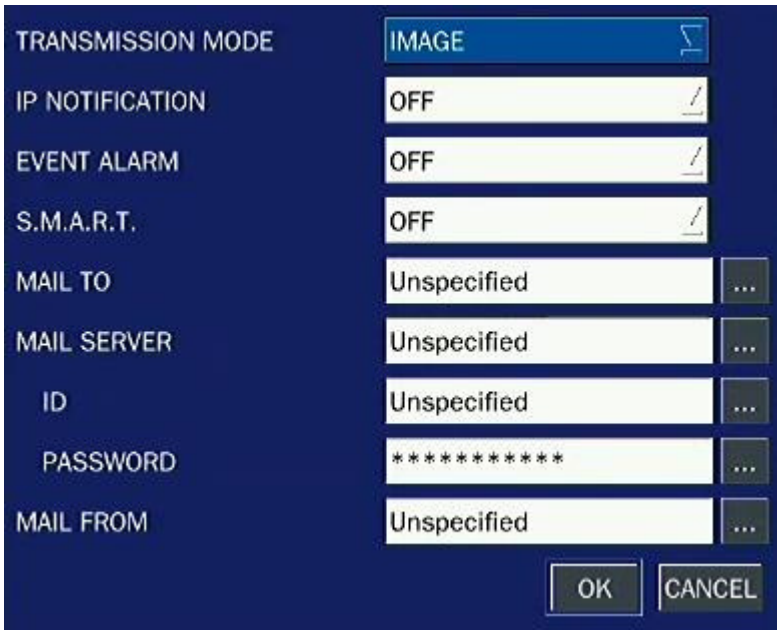
TIME ZONE: Greenwich Mean Time(GMT) is a term originally referring to mean solar time at the Royal Observatory, Greenwich in London. Because NTP synchronizes with Greenwich Mean Time(GMT) regardless of geography, users must set their own time difference. (Ex.KOREA GMT+09:00)

CONNECTON MODE: Select NTP time server connection mode.

INTERVAL: Synchronize the clock by hours which is set on the connection period menu.

TIME: Synchronize the clock at the time daily which is set on the connection period menu.

CONNECTION PERIOD: 1~24

SEND EMAIL	Enable/disable the send e-mail function.(ON/OFF)  **TRANSMISSION MODE:** Sending an image only of the channel that triggered the alarm when an alarm event is triggered. **IP NOTIFICATION:** Enable/disable sending e-mail when the IP address of your DVR is changed. **EVENT ALARM:** Enable/disable sending e-mail reports on the channel that triggered the alarm when an alarm event is triggered. **MAIL TO:** Enter the appropriate email address to enable sending e-mail reports using a virtual keyboard. **MAIL SERVER:** Enter the appropriate mail server information to enable sending daily e-mail reports using a virtual keyboard. **ID:** To set the connection user ID for the mail server using a virtual keyboard. (ex.ID@nadatel.com) **PASSWORD:** To set the connection password for the mail server using a virtual keyboard. **MAIL FROM:** To set the mail address sent to the destination host using a virtual keyboard.

2-7. Setup – SECURITY Mode

Press the SETUP button and enter the password. The setup menu is displayed as picture below. Select SECURITY icon and press SEL button to enter the setup menu item. Navigate through the menu items using the control button (◀ ▲ ▶ ▼) and change the value of the menu item using the control button (◀ ▲ ▶ ▼). To return to setup menu screen, press the ESC button

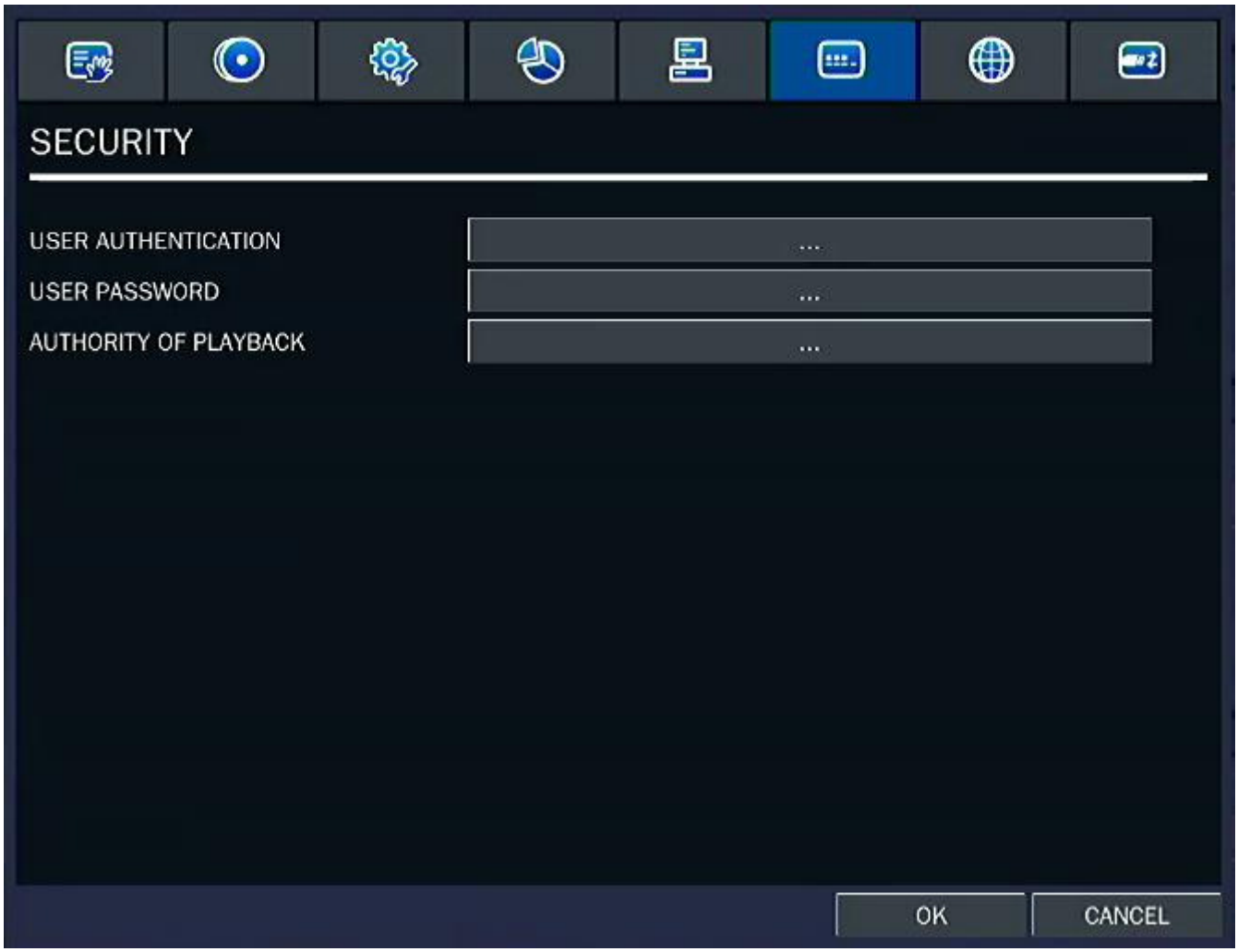
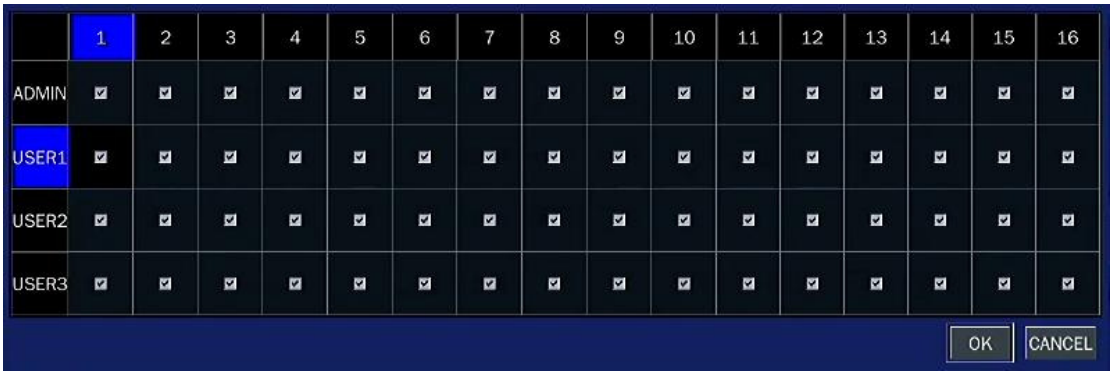


Figure 2.7.1. SECURITY setup screen

Table 2.7.1. Menu Items in SECURITY Setup Screen

Item	Description
USER AUTHENTICATION	**PASSWORD CHECK:** Check either V or blank for the functions such as **Setup, Playback(PB), PTZ, Record OFF(R/OFF), and Network**. V: Ask for a password when the given function is selected for all users. Blank: Does not ask for a password when the given function is selected for all users.

USER PASSWORD	**ADMIN, NETWORK, USER1, USER2, USER3:** Options are ADMIN, USER1, USER2 and USER3. Select USER PASSWORD using control button (◄ ▲ ► ▼) and press SEL button. Select user type using the control button (◄ ▲ ► ▼) and SEL button. Enter the current password and select OK. Enter the new password and select OK. Enter the same password again to confirm and select OK. Then the message "PASSWORD CHANGED" is displayed. The factory default password is **1111**.
AUTHORITY OF PLAYBACK	Enable/disable a covert function in playback mode. V: No covert. Blank: Covert 

2-8. Setup – Network Mode

Press the SETUP button and enter the password. The setup menu is displayed as picture below. Select NETWORK icon and press SEL button to enter the setup menu item. Navigate through the menu items using the control button (◄ ▲ ► ▼) and change the value of the menu item using the control button (◄ ▲ ► ▼). To return to setup menu screen, press the ESC button

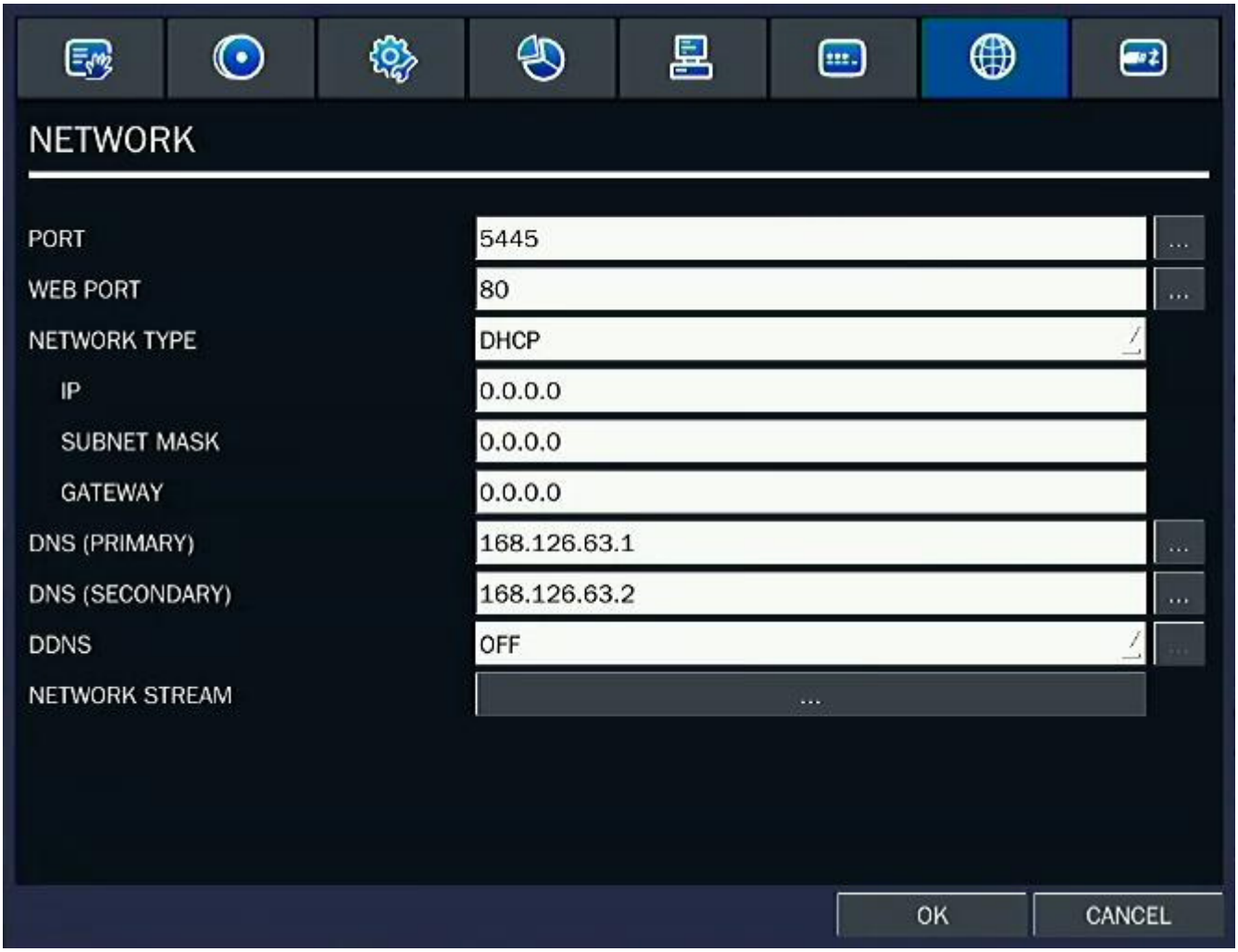


Figure 2.8.1. NETWORK setup screen

Table 2.8.1. Menu items in Network Setup screen

Item	Description
PORT	Port number (Default: 5445)
WEB PORT	Web Sever Port number (Default: 80)
NETWORK TYPE	Select a type of network connection. Options are: DHCP and STATIC Note. Other parts of the network setup screen change depending on what network type you select.
DHCP	DVR automatically get IP varying from time to time from network and does not therefore need to be set.
STATIC	Assigned to an Internet service provider (ISP) to be its permanent address on the Internet.
DNS (PRIMARY)	The address for the primary DNS server
DNS (SECONDARY)	The address for the secondary DNS server
DDNS	Enable/disable using domain name address through DDNS server.

	"ON" mode, DDNS server name appears for domain registration. **DDNS SERVER NAME**: The DDNS sever name is bestddns.com. **CAUTION**: Do not change this sever name. If this is changed, the DDNS service cannot be available. **DDNS INTERVAL**: Set the connection interval (5-60minutes)
NETWORK STREAM	Set the value for network streaming.

2-8-1. Port and Web Port

When you connect one or more DVRs to a network through an IP sharing device, each device must have a unique TCP port number for access to each unit from outside the LAN. Also, the IP sharing device must be configured for port forwarding so when each port is accessed on the IP sharing device, it will forward to the appropriate DVR.

Note: This port number is listed next to the Port menu option in the Network Setup screen. If you plan to access the DVR units only from within the same LAN, the TCP port does not have to be changed.

Network access beyond a router

In order to access the DVR remotely beyond a router (firewall), the user must open TCP port for command level, live/storage channels. User need to open port number 5445.

If the DVR supports remote setup and upgrade function over the network, user need to open additional port number 80.

Web viewer Network access beyond Router

In order to access beyond Router (Firewall), user must open 1 TCP port that is set on NETWORK > WEB PORT. If this port is not open properly, user can not access DVR using direct Web viewer (Example: When NETWORK > WEB PORT is set as 80, 80 TCP port of IP address of DVR must be open.)

2-8-2. Network Types

2-8-2-1. DHCP

An IP address is automatically assigned by the DHCP server, which automatically assigns IP address and other parameters to new devices.

When ADSL or other network being used adopts variable IP method, not fixed IP. This option is used as a way to automatically get IP address.

2-8-2-2.STATIC

1. For the use of fixed IP.

(See your network administrator if you do not have this information.)

2. When DVR is installed in IP sharer that is connected with ADSL, a user can assign fixed IP to DVR from IP sharer itself using “DMZ” function out of such sharer.
Input IP set in DMZ on “IP” field and Gateway of ADSL modem on “Gateway” field. Similarly, for Subnet Mask, DNS address, input relevant values in IP sharer.

Table 2.8.2. LAN

Item	Description
IP	The fixed IP address of the DVR unit.
SUBNET MASK	The subnet mask for the LAN
GATEWAY	The IP address of the Gateway
DNS (PRIMARY)	The address for the DNS server
DNS (SECONDARY)	The address for the DNS server

2-8-3. DDNS

User can use the function to connect to a network with a domain name. When it selects a Sever 1, user can select one type among three DDNS Servers which be supporting for free. (okddns.com for Korea, ddnscenter.com for USA and bestddns.com for other area including EU) The DDNS interval can be set from 5 to 60 minutes. To connect to a network with a domain name, user also has to register a MAC address and create a unique domain name to http://www.bestddns.com, http://www.okddns.com or http://www.ddnscenter.com. Please refer to page 90 for the detail of the registration.

Figure 2.8.2. Network setup screen – DDNS Server 1

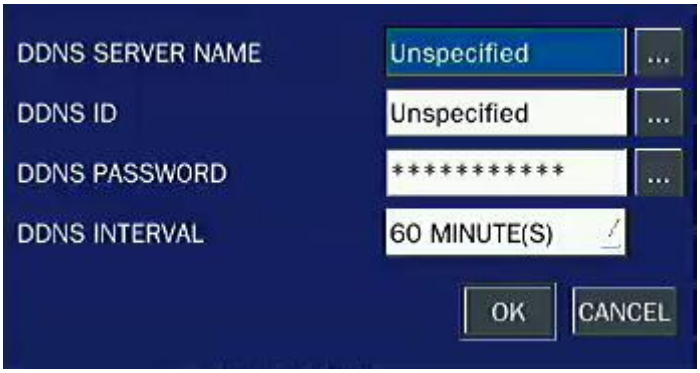


Figure 2.8.3. Network setup screen – DDNS Server 2

If user wants to use other general-purpose DDNS Server, select a Sever 2. Then, user has to input the server name, ID and password using a virtual keyboard.

2-8-4. NETWORK STREAM

User can set the Resolution, the frame rate and the quality for a network stream classified by channel.
It is recommended that user should adjust each item to proper level to get the network service smoothly.

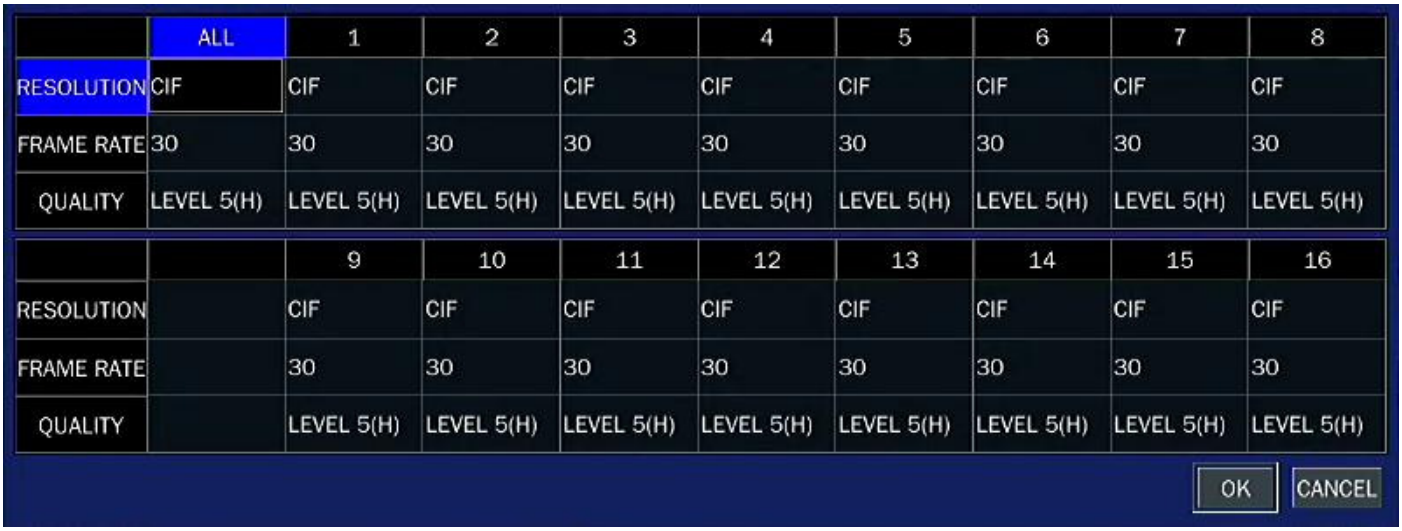


Figure 2.8.4. Network setup screen – Network Stream

2-9. Setup - CONFIG Mode

Press the SETUP button and enter the password. The setup menu is displayed as picture below. Select CONFIG icon and press SEL button to enter the setup menu item. Navigate through the menu items using the control button (◀ ▲ ▶ ▼) and change the value of the menu item using the control button (◀ ▲ ▶ ▼). To return to setup menu screen, press the ESC button

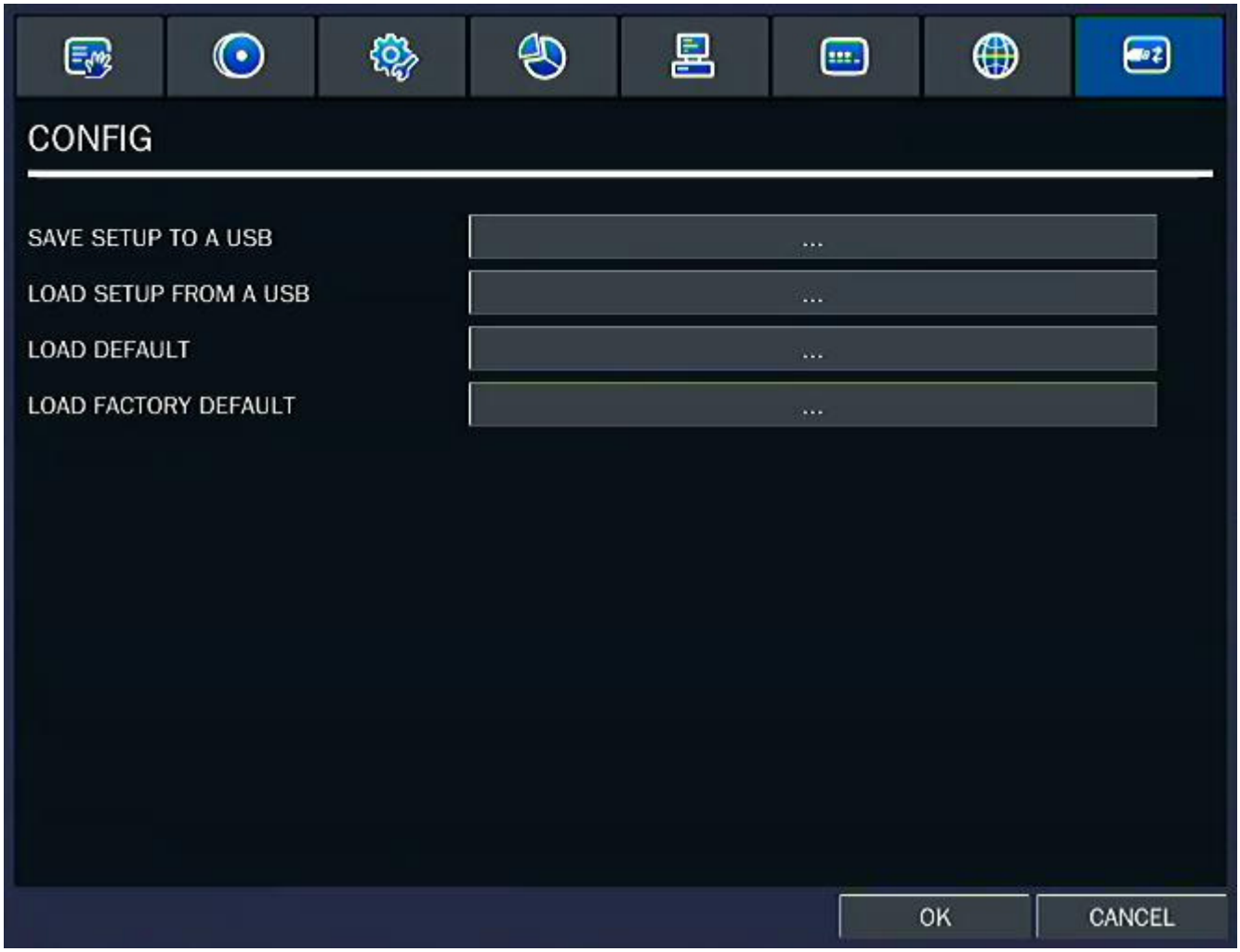


Figure 2.9.1. Config setup screen

Table 2.9.1. Config setup

Item	Description
SAVE SETUP TO A USB	User can save the current configuration (Setting values) of DVR to the USB memory stick. Put the USB stick on the front panel and press SEL to start the saving process.
LOAD SETUP FROM A USB	User can upload the configuration of DVR to another DVR using the USB Memory stick. Put the USB stick on the front panel and press SEL to start the loading process.
LOAD DEFAULT	Select ON to reset the system to the default settings. (The follow settings such as **Language, DVR ID, Security User Authentication, Security User P/W, Date format, DLS settings, Network settings, HDD serial number, and HDD ERROR time** will not be included.)
LOAD FACTORY DEFAULT	Select ON to reset the system to the factory default settings.

3. Saving Setup

To preserve the setup values that you have changed, select YES.

4. Live, Search, and Playback

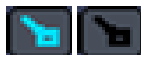
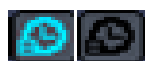
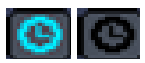
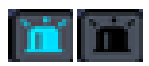
4-1. Live Viewing Screen

In the Live screen, video inputs from the cameras are displayed as they are configured in the Display Setup screen. Various on-screen display (OSD) symbols, which indicate the status of the DVR, are described in Table 5.1.1.

Figure 4.1.1. Live Viewing Screen

Table 4.1.1. Status Indicator Icons in Live Viewing Screen

Icon	Description
	Click the power icon when you want to shut it off by mouse
	Click the LOCK icon when you want to lock and unlock the DVR by a mouse
	Click the SETUP icon on the screen using the mouse to see menu items. Select menu item (SETUP, SEARCH, BACKUP, RECORD, PTZ, SEQUENCE, AUDIO or ALARM-OUT) using the mouse to enable/disable its functions
	Click the AUDIO icon when you want to activate the audio using a mouse
	Click this SEARCH icon when you want to play back and search from the recorded data using a mouse

	Click this BACKUP icon when you want to back up from the recorded data to USB Memory Stick
	Click this PTZ icon when you want to control the PTZ cams using a mouse
	Click this SEQUENCE icon when you want to activate the sequential screen
	Click this MANUAL RECORD icon when you want to manually record
	Click this ALARM OUT icon when you want to activate alarm out
	Click the split screen icon to change the current split screen mode using the mouse or SEL button.
2009/04/14 17:23:40	Displays the current date and time
R:A	Remote control ID display. If no remote ID is set the message “ALL” is displayed.
	Displays the amount of recording on the hard disk from 0-100%.
	Indicates that HDD is recycled.
	Continuous recording in progress.
	Manual recording in progress. To set the Manual recording mode, press the Record button on the front panel.
	Motion alarm recording in progress.
	Sensor recording in progress.
	Indicates that lock activated, this icon will be back to black color when unlock.
	Audio mute. To set audio mute, press the Audio button on the front panel.
	Single audio display. To set audio single for highlighted channel only, press the Audio button on the front panel.
	To mix audio display, press the Audio button on the left side.
	Indicates that alarm is set. To set the alarm function, press the Alarm button on the front panel.
	Indicates that alarm output is activated.
	Mixed audio display

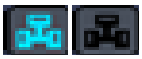
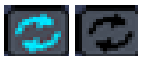
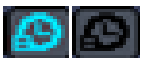
	Alarm indicator. When there is an alarm (sensor or motion alarm) in the video channel, this icon will be highlighted bright blue.
	Indicates that a network client is connected to the DVR.
	Indicates that sequencing mode is enabled.

Table 4.1.2. Button functions in Live Viewing Screen

Button	Description
	Select channel to be displayed in full screen mode.
	Switch between full screen and quad display mode.
SEQ	Press to start auto sequencing of the screen in full screen mode. (Toggle)
RECORD	Press to start and stop manual recording.
SEARCH	Press to go to the search menu. Event search /Time line search /Log /Archive search
ARCH	Press to capture a still image. The still image will be stored into hard drive. It can be transferred to the USB device.
SETUP	Press to launch SETUP menu.
ESC	Press for temporal storage of the changed value or to return to the previous menu screen.

4-2. SEARCH Screen

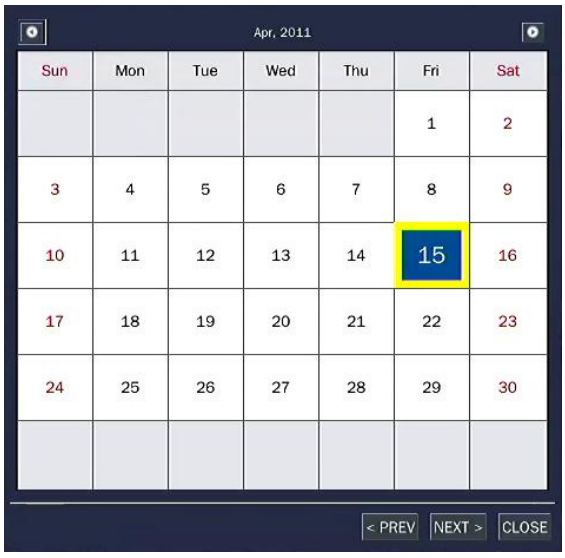
To enter the search screen, select SEARCH menu on the screen using the mouse or press SEARCH icon on live screen.

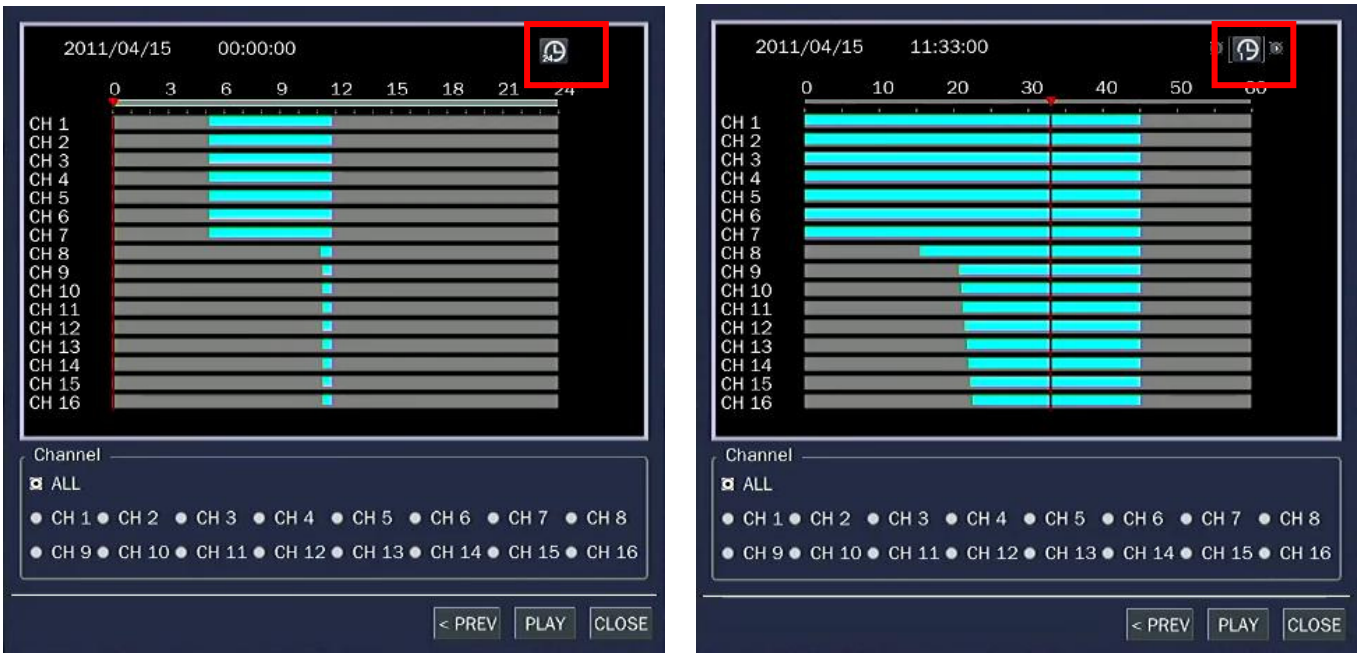
Figure 4.2.1. Search Screen

There are 7 ways of search menu such as TIMELINE, EVENT, GO TO FIRST TIME, GO TO LAST TIME, GO TO SPECIFIC TIME, ARCHIVE and LOG on the screen.

4-2-1. TIME-LINE Search

The TIME-LINE search window is used to find the stored video by using the time line bar.





When it clicks a Timeline menu, user can see a calendar which has recording data. Select a specific date and time. Use a drag-and-drop function of the mouse control. User can select a specific minutes using a button in the above red box. Press a PLAY button after setting a specific time. Press the PREV to return to the SEARCH window.

4-2-2. Event Search

The Event Search window is used to find stored video.

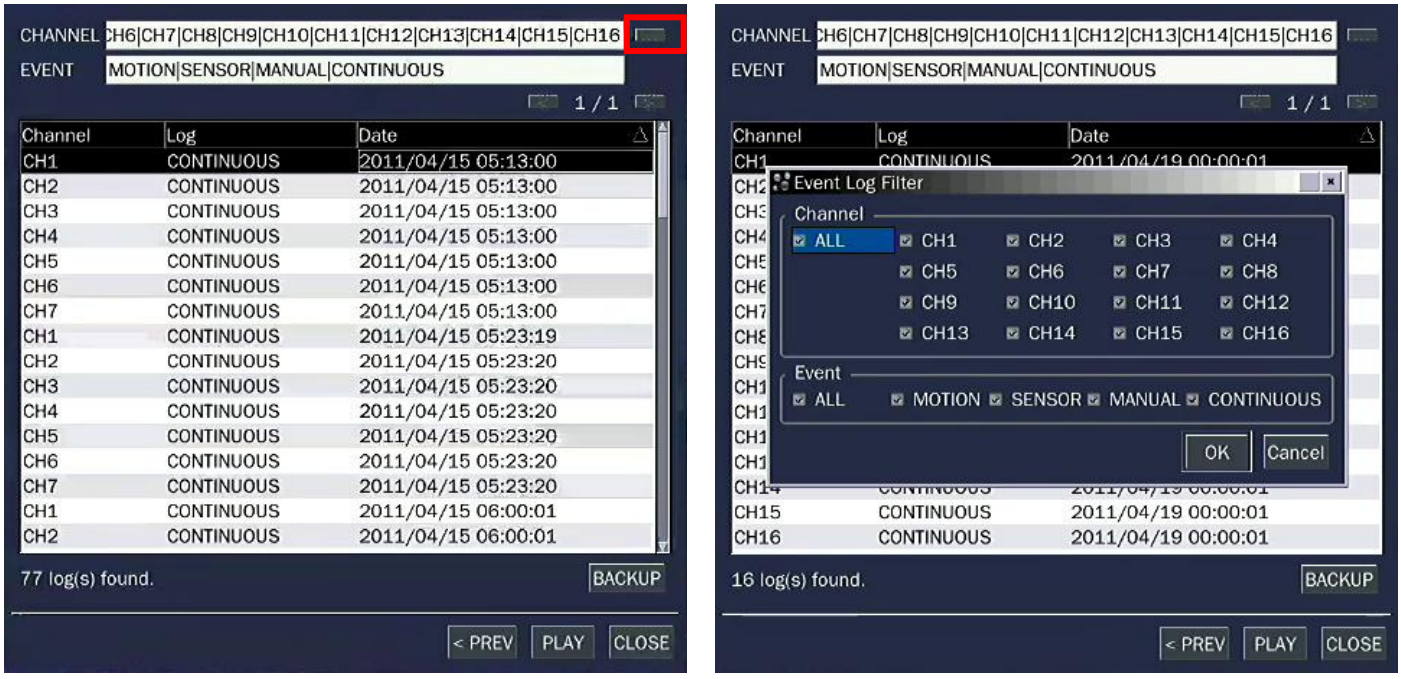


Figure 4.2.2. Event Search screen

When it clicks an Event menu, user can see a calendar which has recording data. Select a specific date and then user can see all data. Press a PLAY button to playback the data or a SAVE button to save the data at once after selecting a specific data. User can find a data of the specific channel and event using a button in the above red box. Press the PREV to return to the SEARCH window.

4-2-3. Go To First Time

You can access from the oldest recorded data on the DVR hard drive by selecting GO TO FIRST TIME on the SEARCH window. Press the PREV to return to the SEARCH window.

4-2-4. Go To Last Time

You can access from the last minute recorded data on the DVR hard drive by selecting GO TO LAST TME on the SEARCH window. Press the PREV to return to the SEARCH window.

4-2-5. Go To Specific Time

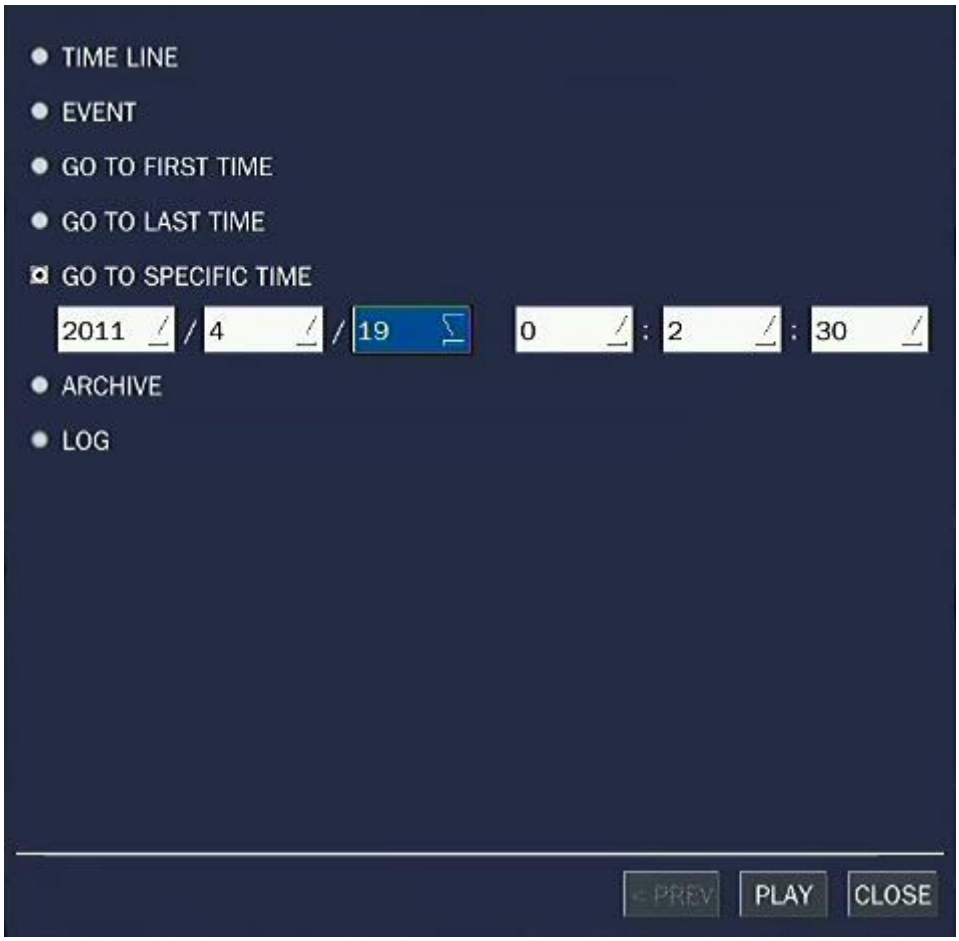


Figure 4.2.3. Go To Specific Time

User can search for video data from a specific instance by setting the date and time in the Go To Specific Time menu. Use the mouse or the control button (◀ ▲ ▶ ▼) on the remote control to change the date and time value and press the PLAY button after setting. If there are no the video data in the set date and time, the DVR will play the latest video data.

4-2-6. Archive Search

The ARCHIVE Search window is used to find previously stored video or images.

Figure 4.2.4. Archive Search Screen

When it clicks an Archive menu, user can see a calendar which has recording data. Select a specific date and then user can see all data. When it presses a Display button, the still image or the first frame of the selected video is opened and user can save the data.

4-2-7. Log Search

You can access the LOG list search screen by selecting LOG on the SEARCH window.

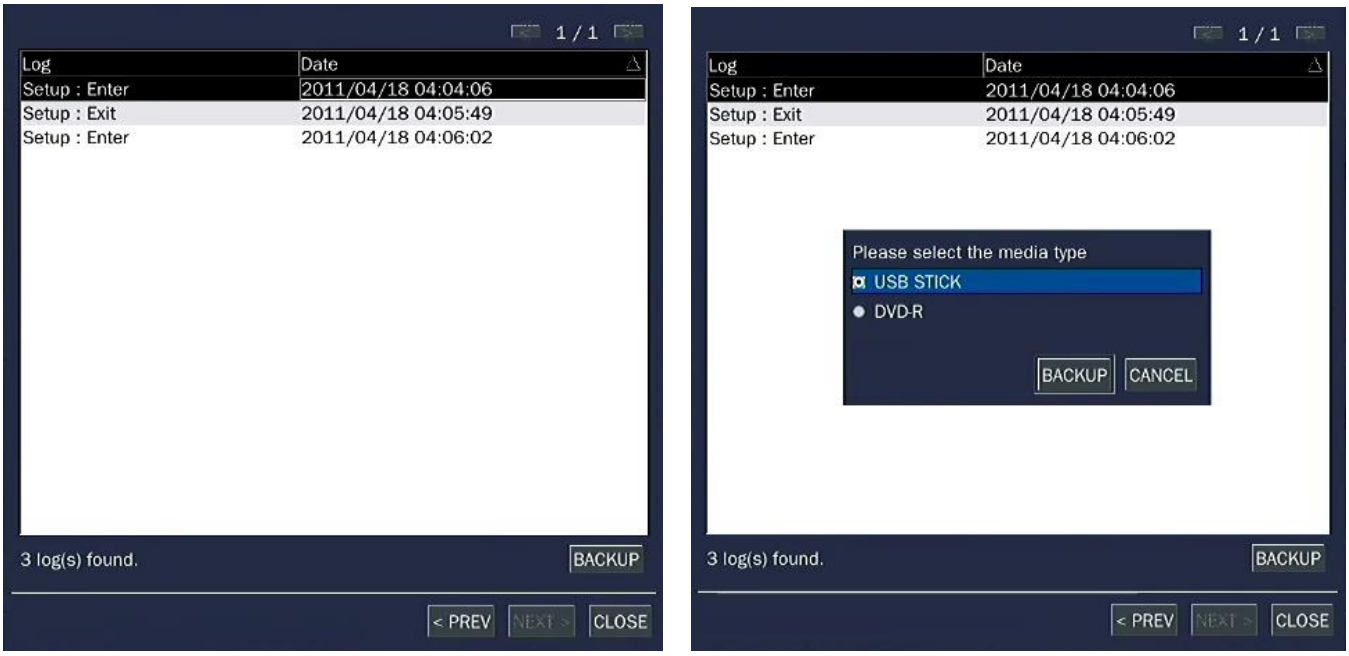


Figure 4.2.5. Log Search Screen

When it clicks a Log menu, user can see a calendar which has recording data. Select a specific date and press NEXT button. Then user can see all log data. Press SAVE button to save the data and then the data is saved to text file format.

4-3. Play mode

During playback of a recorded event, the mode changes from SEARCH to PLAY. While in PLAY mode, you may return to the SEARCH screen by pressing the X button on the status bar or the ESC button of a remote control.

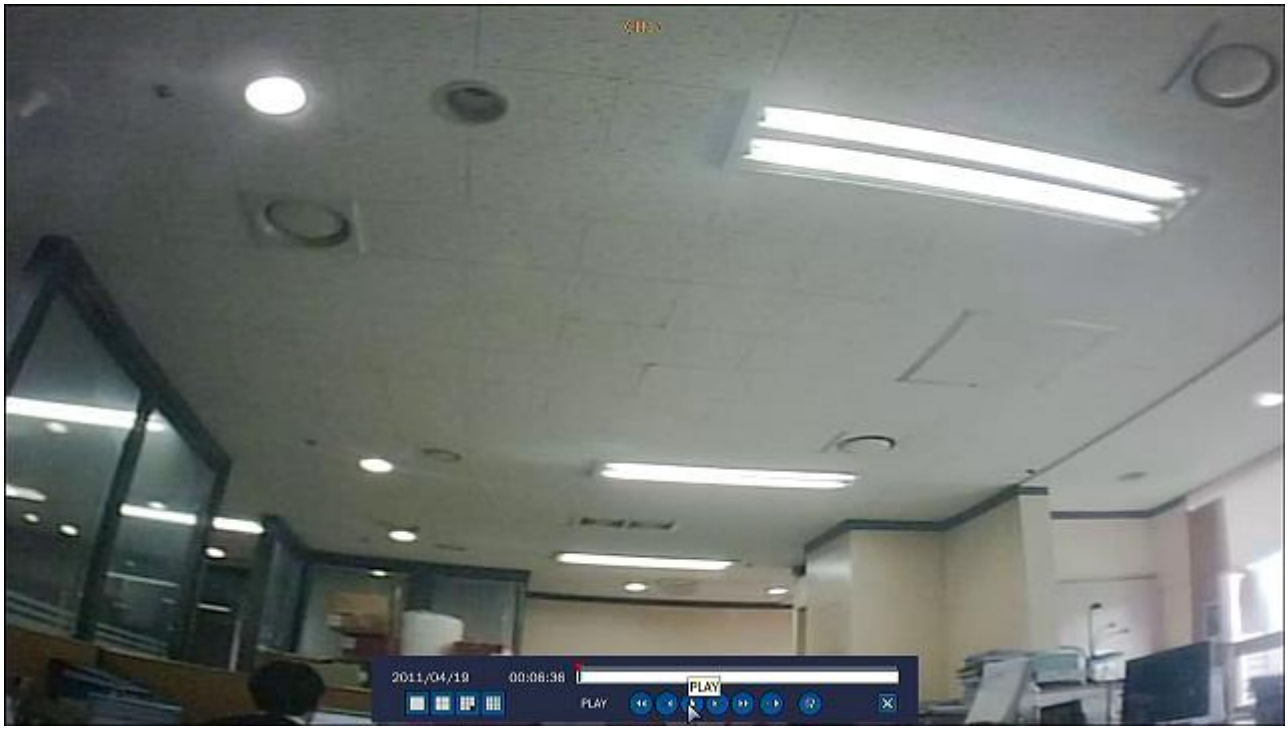


Figure 4.3.1. PLAY Mode Screen

The following status bar hides automatically and appears again when putting a mouse pointer to the bar.

Table 4.3.1. Button functions in PLAY Mode

Button	Description
	Return to the previous menu screen, search window, or exit from the Menu
◀◀	Press to rewind the footage at 1x, 2x and 4x speeds. Reverse playback speed is shown as -1x(normal), -2x (2 times normal) and -4x (4 times normal) at the bottom right of the screen.
--◀	Jump/Step backward. The playback position moves 60 seconds backward.
▶/ II	Press to play or pause recorded video.
▶--	Jump/Step forward. Playback position moves 60 seconds forward.
▶▶	Press to fast forward the footage at 1x, 2x and 4x speeds. Playback speed is indicated as +1x, +2x and +4x for normal, twice and 4 times of the regular speed at the bottom right of the screen.
	Press to backup the video.

5. PTZ Control

To control the PTZ functions of the camera, select PTZ menu on the screen using the mouse. Select the item you wish to control the PTZ camera and control them using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control. Please refer to the table 5.1. for the control.

Figure 5.1. PTZ Control Screen

Table 5.1. Button Functions in PTZ Control

Item	Description
INITIALIZE	Initialize the PTZ settings of the selected camera.
PAN / TILT	Select PAN/TILT using the mouse or the control button (◀ ▲ ▶ ▼) and press SEL button on the remote control. Adjust the tilt(UP/DOWN) / pan(LEFT/RIGHT) position using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control.
ZOOM / FOCUS	Select ZOOM/FOCUS using the mouse or the control button (◀ ▲ ▶ ▼) and press SEL button on the remote control. Adjust the zoom(Mouse Wheel Down or Up/Down button of the remote control)/focus(Mouse Wheel Up or Left/Right button of the remote control)position.
OSD	Select the OSD to enter the menu. Control keys are Right, Left, UP, Down, Select, Far (REW KEY), and Near (FF KEY). Press the ESC button to return to the main menu. Press the PTZ button to escape from the OSD menu.
AUTOSCAN	Press the right key (▶) on the control button to start auto scan Press the left key (◀) on the control button to stop auto scan.
PRESET	Select the PRESET and press the left key (◀) on the control button. Then, number input window will appear. Set the number (3 digits) using the number key and press the SEL to set the preset number for the current position. Press the right key (▶) on the control button and set the number (3 digits) to go to the preset number.
TOUR	Select the TOUR and press the right key (▶) on the control button. Then, number input window will appear. Set the number (1 digit) using the number key and press SEL to make the group number work. Press the left key (◀) on the control button to stop tour.

	User can set the preset number in the tour group of the OSD menu.
NUMBER	Avail ble only on the TOUR and PRESET menu.
	Press the ESC button to return to the main menu.

- **Preset/ Tour/ OSD/ Autoscan function are available on the specific model AP8777 and PMA-200.** (Select it in the NAME of PTZ setup menu)

6. Back up

6-1. Still Image backup onto USB flash memory

Still images can be captured and archived onto the USB stick or hard drive in live mode or while playing back recorded video. In live mode, press the BACKUP button to launch the archive function or select BACK UP menu on the screen using the mouse.

1. Select a specific channel which wants to backup on live screen.
2. When you press BACKUP button, the archiving screen will display as Figure 6.1.1.
3. Once you press Backup button, the system will start to archive the data to the selected media.

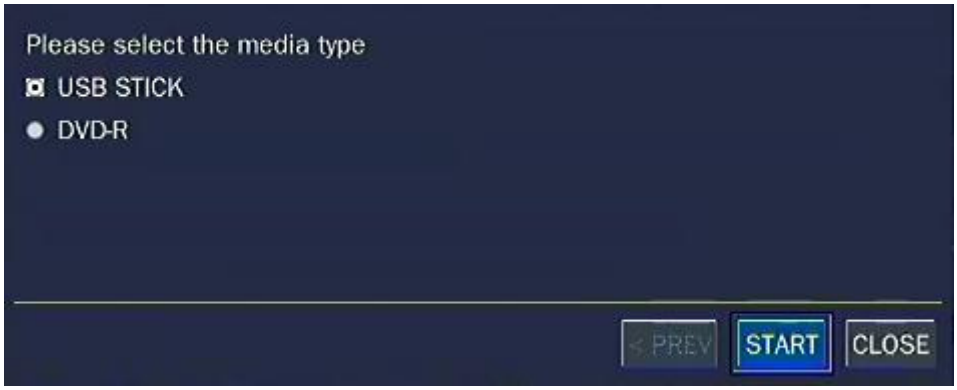


Figure 6.1.1. Still Image Archiving and Backup Screen

NOTICE	For a backup using a USB stick, a format of the USB stick has to be set to FAT32.

6-2. Video backup onto USB flash memory

Video can be captured and archived onto the USB stick or hard drive while playing back recorded video. In playback mode, press the BACKUP button to launch the archiving function.

1. When you press BACKUP button, the DVR will ask whether to archive a Still Image or Video clip.
2. If the user selects VIDEO, the DVR will ask for the media. To use the huge backup, the external USB HDD has to be mounted.
3. After selecting the media, the DVR will ask for the channel and the setting of the archiving duration. If the huge Backup is selected, the duration is from 1 hour to 24 hours.
4. After selecting the channel and setting of the duration, the system will start to archive the data to the selected media.

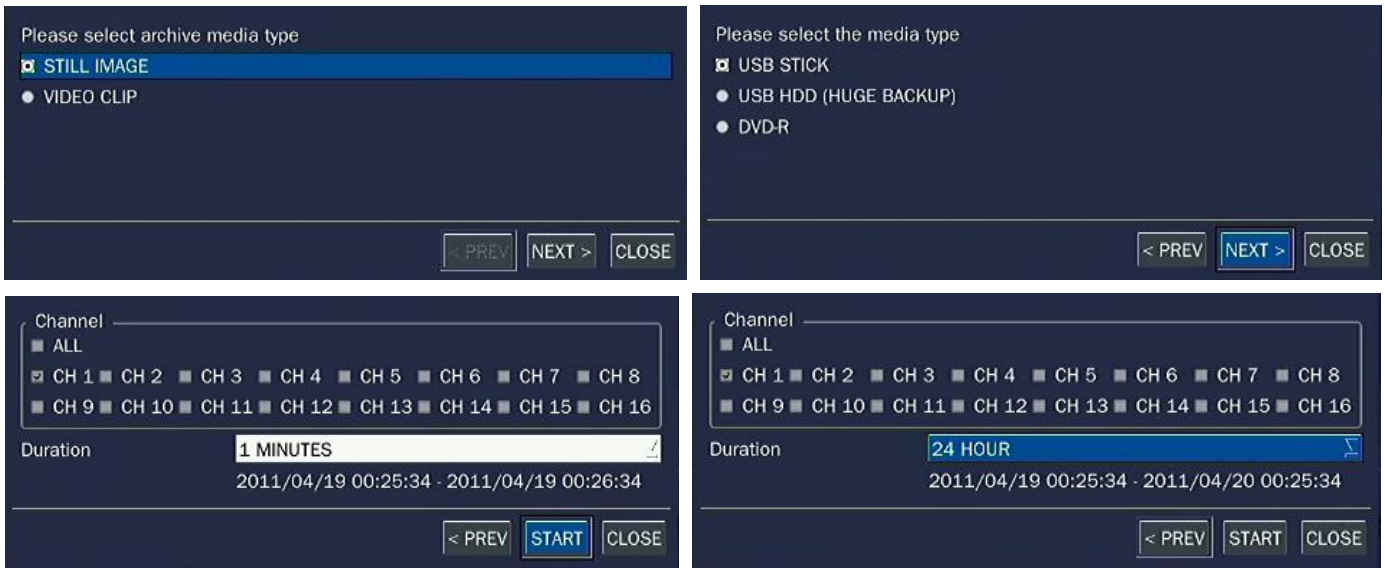

Please select archive media type
STILL IMAGE
VIDEO CLIP
< PREV
NEXT >
CLOSE
Please select the media type
USB STICK
USB HDD (HUGE BACKUP)
DVD-R
< PREV
NEXT >
CLOSE
Channel
ALL
CH 1 CH 2 CH 3 CH 4 CH 5 CH 6 CH 7 CH 8
CH 9 CH 10 CH 11 CH 12 CH 13 CH 14 CH 15 CH 16
Duration
1 MINUTES
2011/04/19 00:25:34 - 2011/04/19 00:26:34
< PREV
START
CLOSE
Channel
ALL
CH 1 CH 2 CH 3 CH 4 CH 5 CH 6 CH 7 CH 8
CH 9 CH 10 CH 11 CH 12 CH 13 CH 14 CH 15 CH 16
Duration
24 HOUR
2011/04/19 00:25:34 - 2011/04/20 00:25:34
< PREV
START
CLOSE

Figure 6.2.1. Video Archiving and Backup Screen

The DVR will convert the corresponding portion of the video into an AVI file.

6-3. Transferring still images or video from the ARCHIVE list

The stored data onto hard drive will be found in the ARCHIVE list in SEARCH window.

User can back up still images or video into the storage device from the ARCHIVE list.

1. Select the date to begin searching and navigate through the days using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control.
2. Once you have selected the date, press NEXT button to open the list of stored data.
3. Use the mouse or the control button (◀ ▲ ▶ ▼) on the remote control to scroll through the on-screen listings.
4. Select a list of stored events that happened previous to or after the current selection.
5. Once the desired event has been selected, press NEXT button to view the still image or the first frame of the selected video.
6. Press the BACKUP button to launch the archiving function in playback mode.
7. Press CLOSE button to return to the SEARCH window.

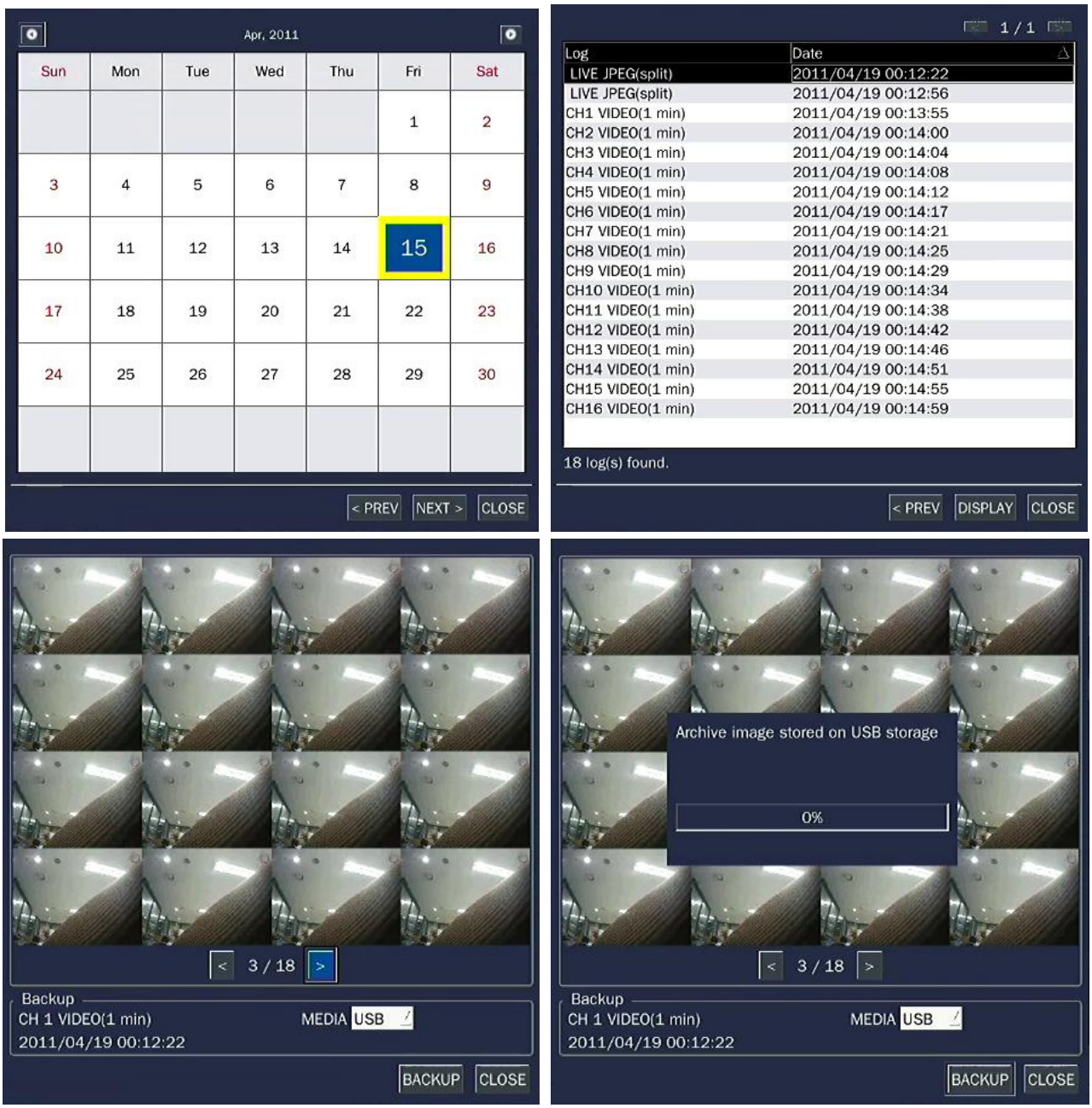


Figure 6.3.1. Archive Search Screen

6-4. Playback of Backup Video

- H.264 format: H.264 format video can be played back by the player (the HD player) that the DVR copies on USB thumb drive with video.
  Three files are copied on USB thumb drive
  - H.264 file: H.264 format video file.
  - INDEX file: Title file of date and time.
  - HD PLAYER: Exclusive video viewer.

- AVI conversion: User can convert the H.264 format video to AVI format video which can be played back by Window Media Player™ or other media player that is compatible with AVI format video.

7. Upgrading Firmware

In order to upgrade, the firmware upgrade file must first be downloaded and copied into the USB memory stick. Create a new folder in the USB memory stick and name it “upgrade”. Copy the firmware upgrade file “xxxxxx.bin” into the “upgrade” folder. Then, boot a system after inserting the USB memory stick on the system. The system will be upgrade automatically.

NOTICE

The folder on the USB memory stick must be named **“upgrade”**.

After the firmware upgrade file is copied into the USB memory stick, connect the USB memory stick to the USB port on the front panel and do the followings:

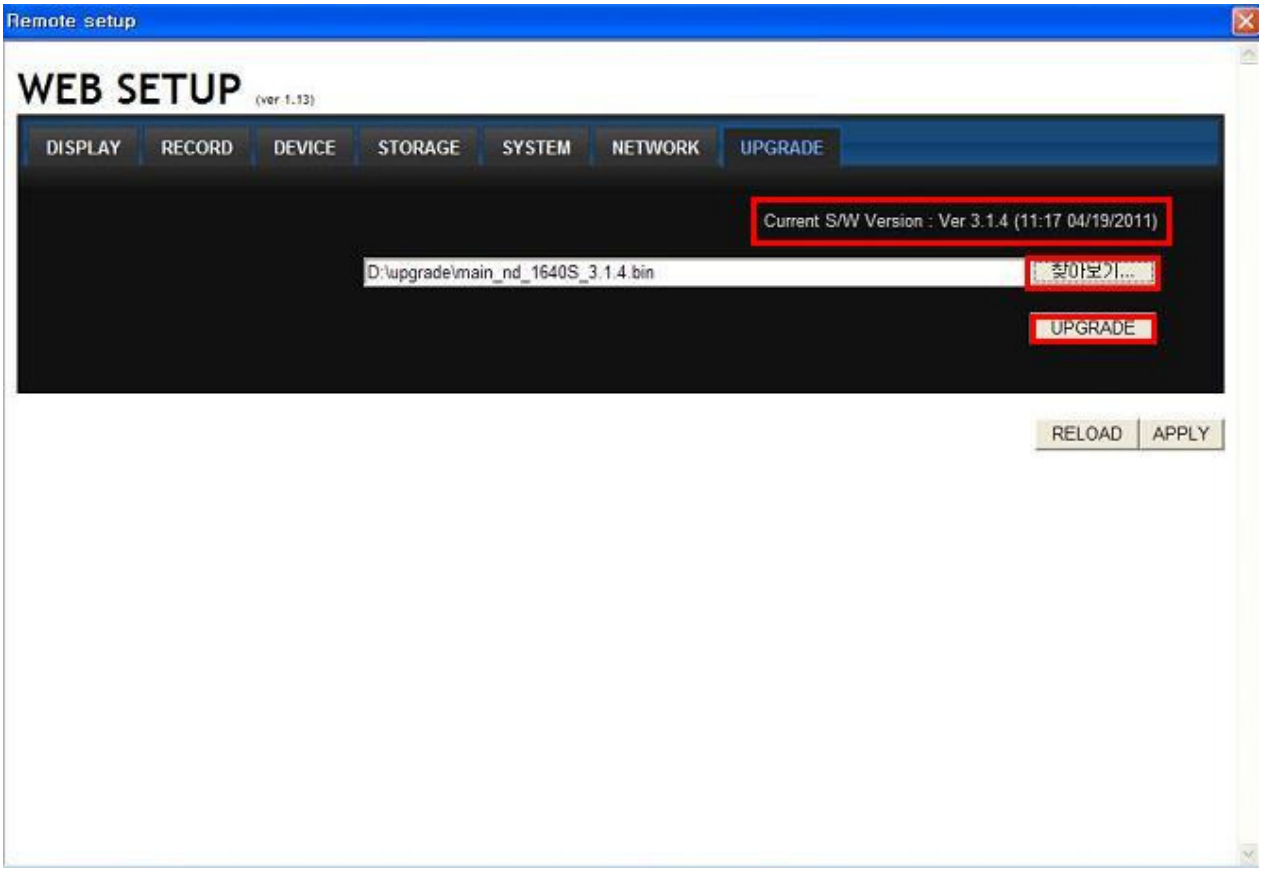
Remote Firmware Upgrade

User can upgrade the firmware via Network as follows.

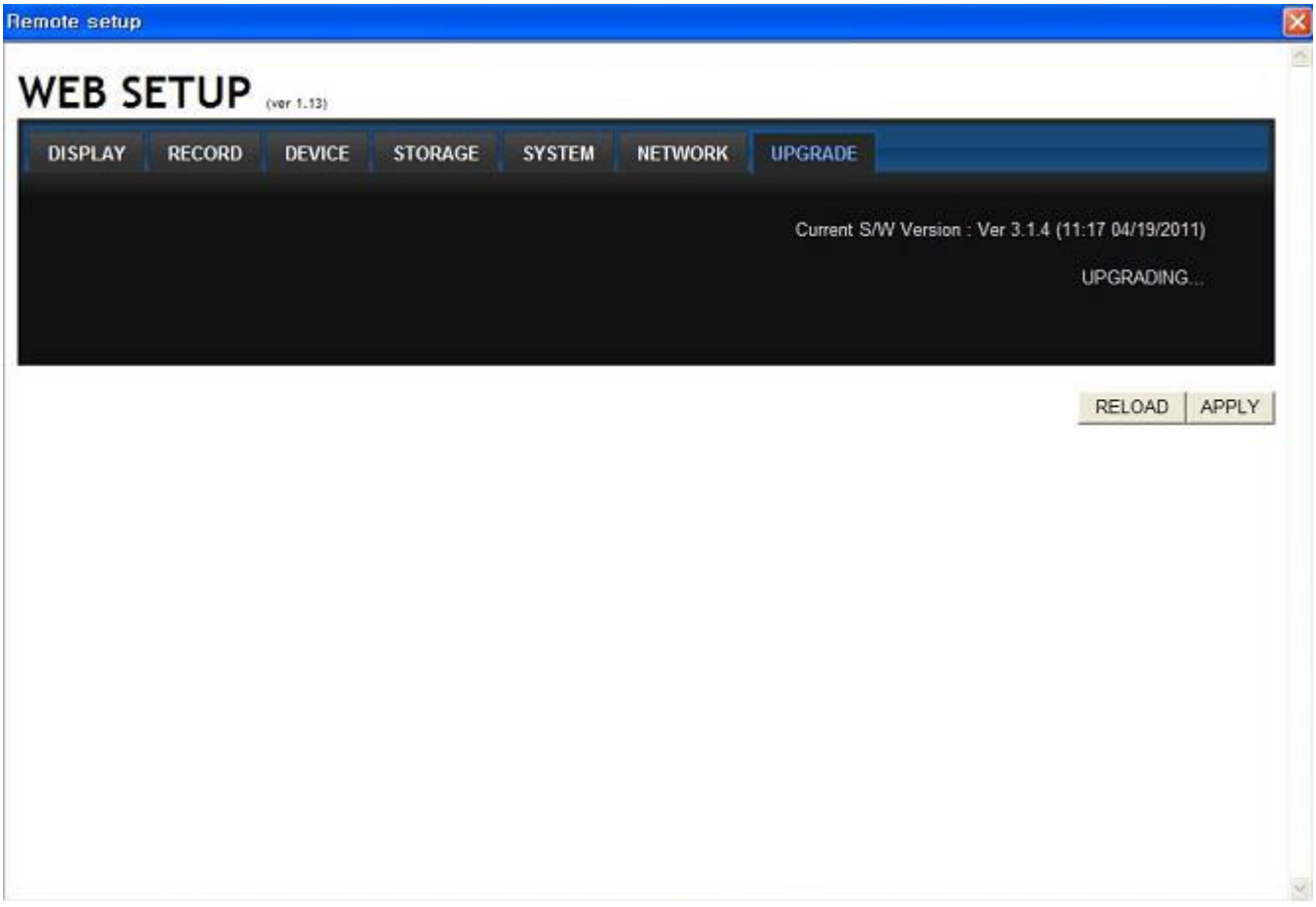
1. Go to the Remote Setup menu on the UMS Multi or Web Viewer.

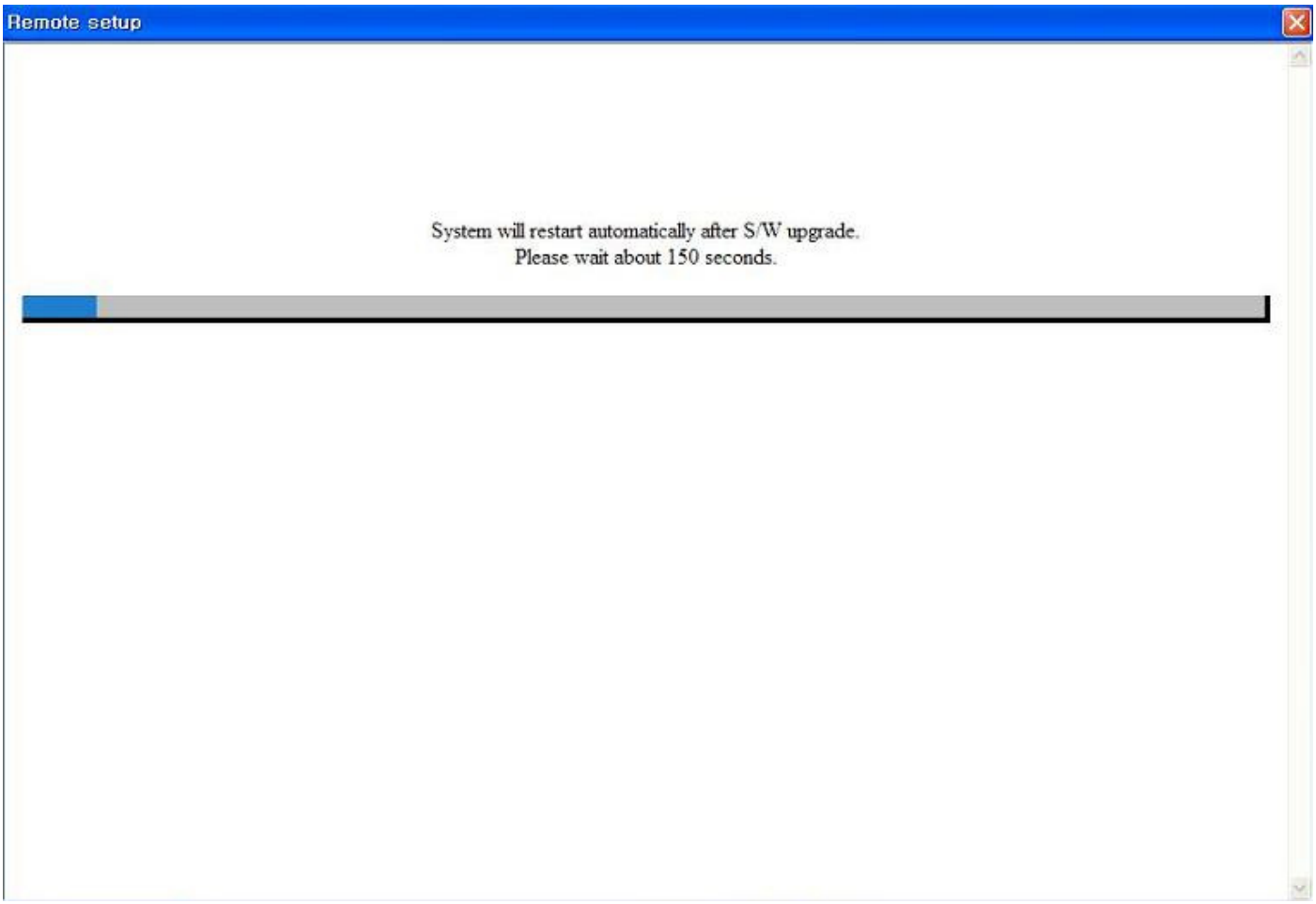
2. Press the password for admin. Just admin is possible to connect to the remote setup menu.

3. Go to the Remote Upgrade menu. Then, you can see the current F/W version as follows. To upgrade a new F/W, insert the F/W in your PC and press the UPGRADE button.

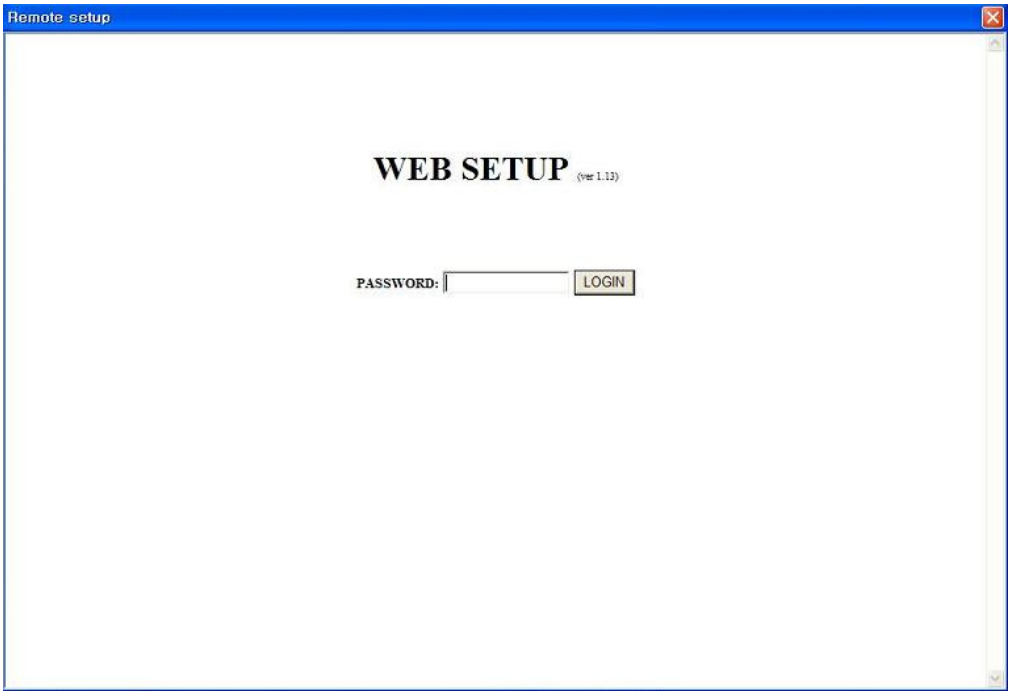


4. Then, you can see the following progress bar and it would be taken around 150 seconds to upgrade.





5. When finishing the upgrade, the network streaming would be connected again automatically and you can see the following screen. Please check the current F/W version if the upgrade is succeeded.



8. Network access using the Exclusive network viewer, UMS single

The DVR provides a live remote monitoring feature. Remote monitoring requires installation of the network viewer on your PC.

NOTICE

In a high bandwidth network, a maximum of four users can access one DVR simultaneously.
In a low bandwidth network it is recommended that only one user access the DVR at a time.

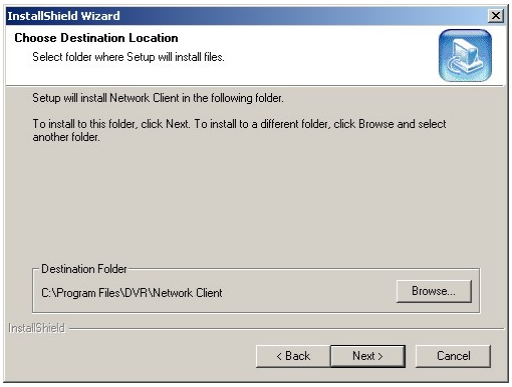
8-1. PC requirements

- CPU: Intel Pentium IV 1.4Ghz or higher
- Memory: 512MB (1GB or higher is recommended.)
- VGA memory: 16MB (64MB or higher is recommended.)
- Resolution: 1024x768
- O/S: Windows 2000, XP Professional, XP home
- Direct X: DirectX 8.1 or higher

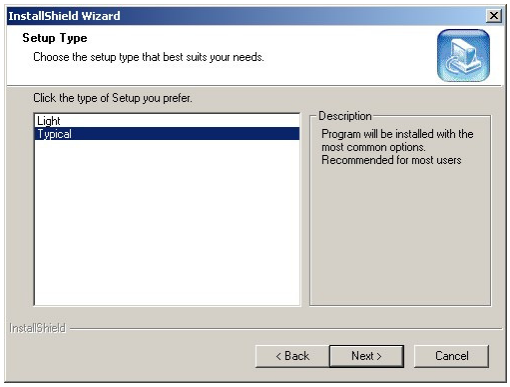
8-2. Installing the network viewer

1. Insert the provided CD in the CD drive and double-click “UMSClient(XXXX)**.exe**”

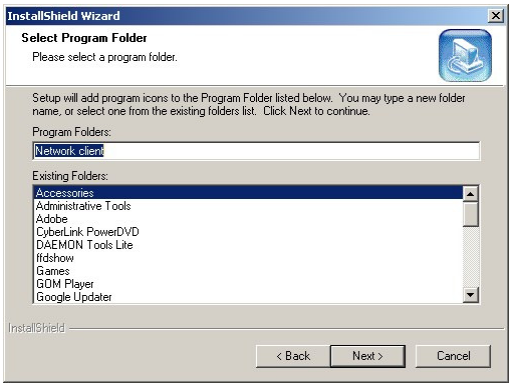
2. Select a destination folder and click “Next”.


InstallShield Wizard
Choose Destination Location
Select folder where Setup will install files.
Setup will install Network Client in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\DVR\Network Client
Browse...
InstallShield
< Back
Next >
Cancel

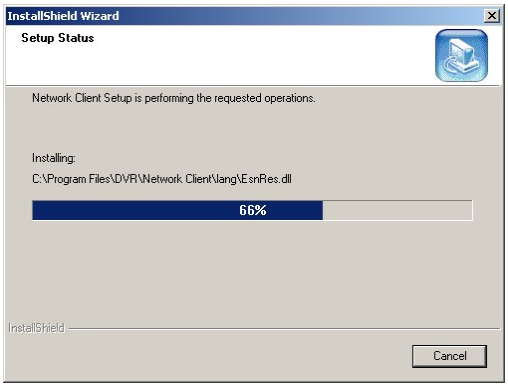
3. Select the type and click “Next”.



4. Select the program folder and click “Next”.



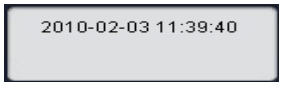
5. The setup status screen is displayed.

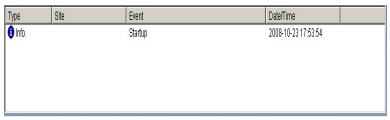


After the installation is completed, **“UMS Client”**

icon is displayed on the desktop.

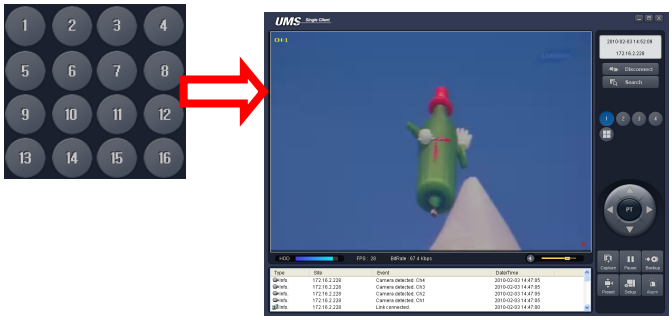
8-3. Live monitoring mode and functions.

Button	Function	Description
	**DATE & TIME**	Displays the current date and time.
	CONNECT/DISCONNECT	Connect/disconnect network connection.
	SEARCH	Switches the live mode to search mode.
	DISPLAY MODE	Select a channel and screen display mode.
	PAN/TILT/ZOOM/ FOCUS	Control the PAN/TILT/ZOOM/FOCUS features on the remote camera.
	CAPTURE	Capture a still image from live screen.
	PLAY/PAUSE	Play/pause live video.
	ALARM	The ON/OFF button of the alarm output of the DVR. When an alarm of the DVR is output, this button becomes Red.
	SETUP	Display the setup screen of the network viewer.
	HDD USAGE	DVR HDD storage Indicator.
	NETWORK BANDWIDTH	Shows the transferred frames and

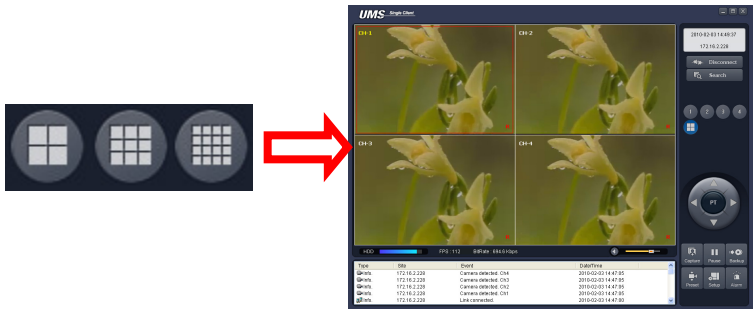
		network bandwidth.
	AUDIO	Adjust the volume. The audio can be turned on or off by clicking the audio icon.
	**LOG WINDOW**	

Operations of the display mode of the main screen

- Single channel display - Click the one of channel button or double-click the channel screen.



- QUAD/-screen display - Click the QUAD button to switch to quad-screen display



- Full screen display - Click the maximize button to display only screen and hidden the operation panel.

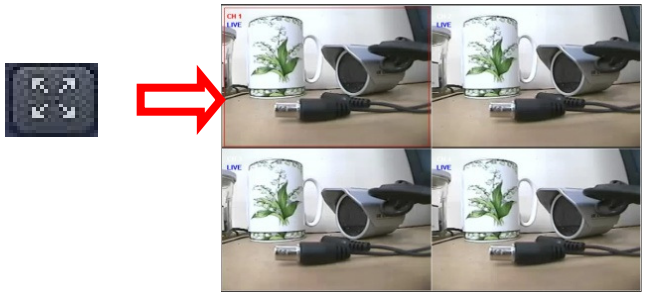
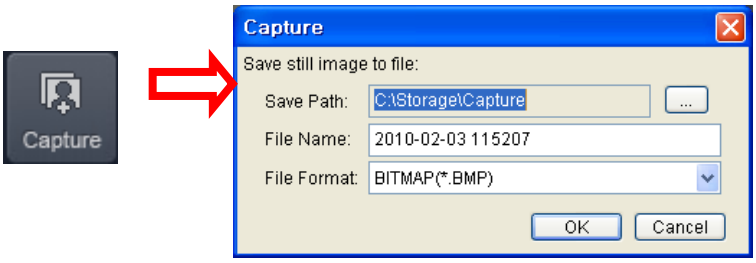


Image capture of live screen

Still-image of live screen can be captured and saved as BMP or JPEG file.

1. Click the channel to be captured. Then the channel screen is surrounded with a red line.
2. Click the CAPTURE button. Then the IMAGE CAPTURE dialog is displayed.



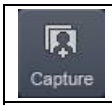
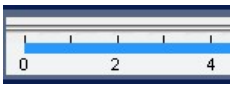
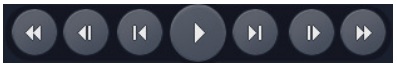
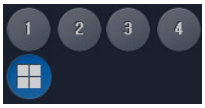
3. Set the conditions and click OK button. Then still-image is saved.

8-4. Bi directional audio

The UMS Client allows for bi directional audio between the client and a dvr unit. On the PC, to use bi directional audio, you will need a sound card of handling a microphone and speakers. On the dvr side, you will need to connect a microphone to the audio in connection, and a pair of amplified speakers to the audio out connection.

8-5. Remote search mode and functions

Button	Function	Description
2008-10-23 19:04:53 172.16.2.208	**DATE & TIME**	Displays the recording time of the data selected on the time bar at the bottom of the main user interface.
Disconnect	**DISCONNECT**	Disconnect network connection..
Live	**LIVE**	Switches the search mode to live mode.

	**CAPTURE**	Capture a still image from live screen.
	MARK IN	Set the start time for video backup.
	MARK OUT	Set the ending time for video backup.
	BACKUP	Backup the selected recorded video as AVI format.
	SEARCH CALENDAR	The calendar shows dates with recorded video in a light blue and the selected date in dark blue.
	**TIMELINE BAR**	The timeline shows recorded data in dark blue on the bar.
	**PLAYBACK BUTTON**	The playback buttons.
	**DISPLAY MODE**	Select a channel and screen display mode.

Searching and playing video in the remote DVR

Video recorded in the remote DVR or Video recorded on the PC can be searched and played back.

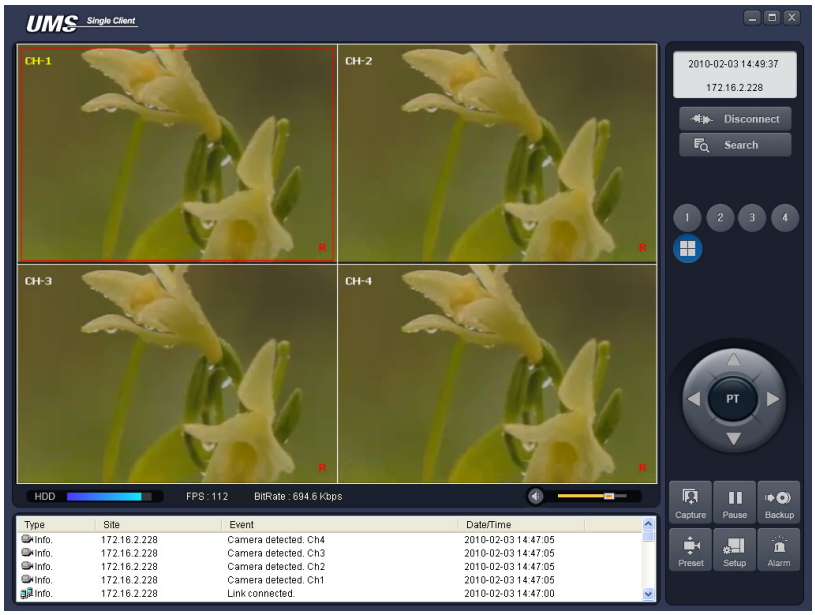
1. Connect the network to the remote DVR and press SEARCH button. Then the mode is changed from the live mode to the search mode.

- Searching the video recorded in the remote DVR: Connect the network to the DVR..
- Searching the video recorded in the PC: Do not connect the network to the DVR.

2. Select the date to search the video.

3. Drag the slid on the time scale and drop it between 0 to 24.

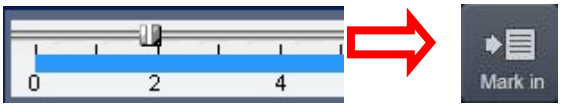
4. Press the PLAY button. Then the video recorded in the remote DVR is played back.



Backup of video in the remote DVR

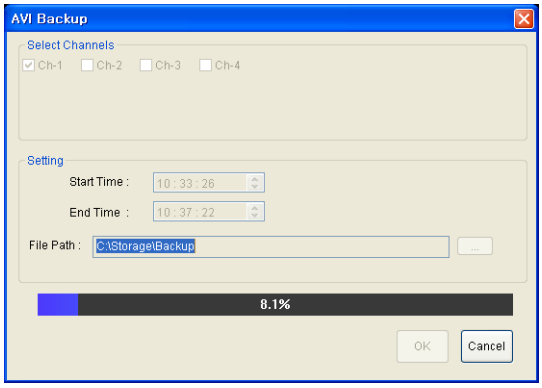
Video recorded in the remote DVR cab be backed up on the PC HDD as AVI format.

1. Connect the network to the remote DVR and play the video recorded in the remote DVR.
2. Drag the slid on the time scale and drop to the start time for video backup and press the MARK IN button.



3. Drag the slid on the time scale and drop to the end time for video backup and press the MARK OUT button. Then the marked time is displayed in dark green.

4. AVI Backup dialog is displayed. Click the OK button. Then the marked video is backed up.

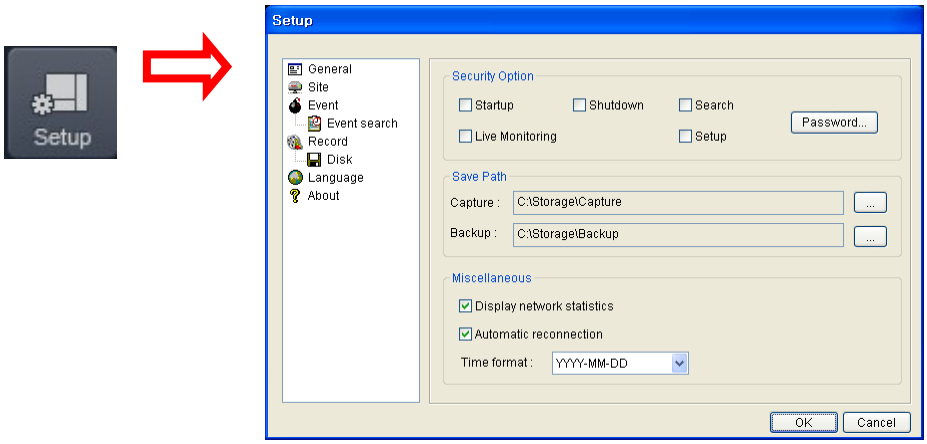


- Start time / Stop time: Backup time can be changed.

- File path: Shows the folder that the backup file is recorded.
- Channel: Shows backup channel.

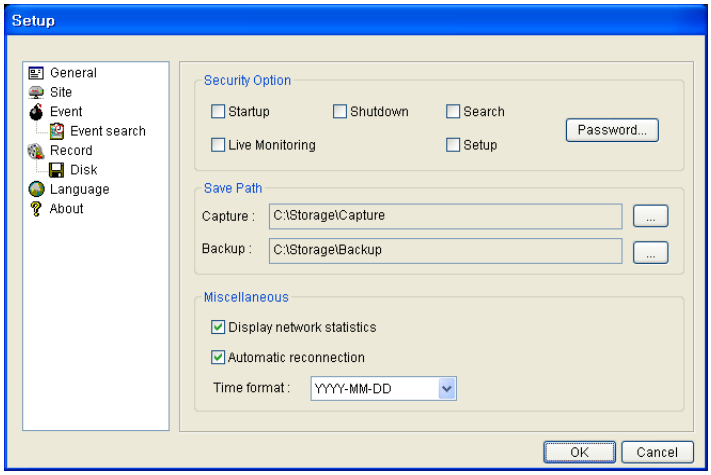
8-6. PC System configuration

Click the SETUP button. Then the Setup dialog is displayed.



Setting General

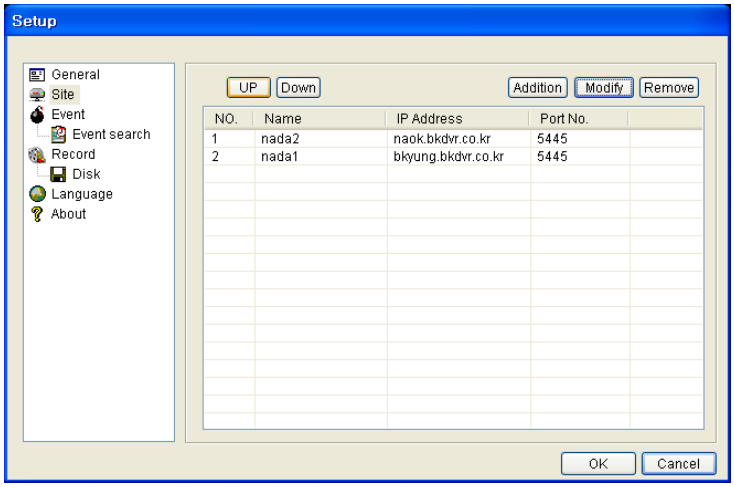
Set the Security Option, Save Path, and Miscellaneous.



- **Security Option**: Set a password for security options. When you access any of the selected functions, you will need to enter the password.
- **Save Path**: Specify the location to record for backup and still image capture.
- **Automatic reconnection**: If a user selects this function, the client S/W will automatically try to connect to the previously connected IP address if the network connection is lost.
- **Display network statistics**: If a user selects this function, the client S/W will display network status, Bit rate and Frame rate.
- **Time Format**: Change the mode the Client software displays the time.

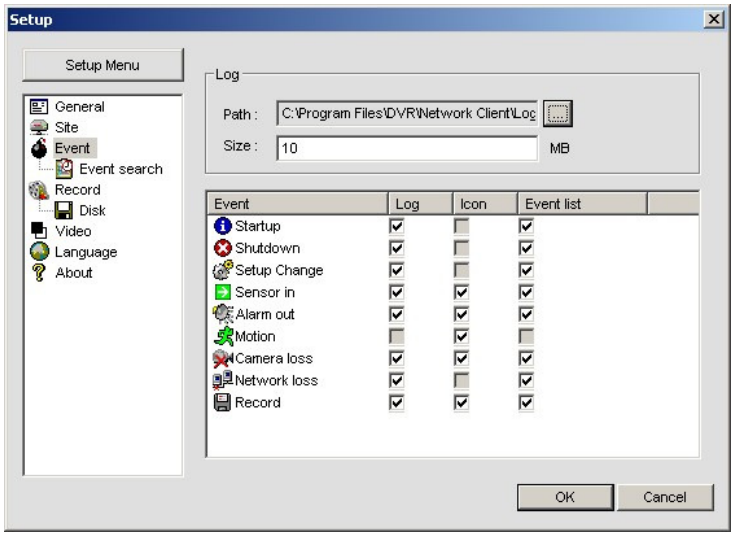
Setting Site

The remote DVRs can be added, modified, and removed.



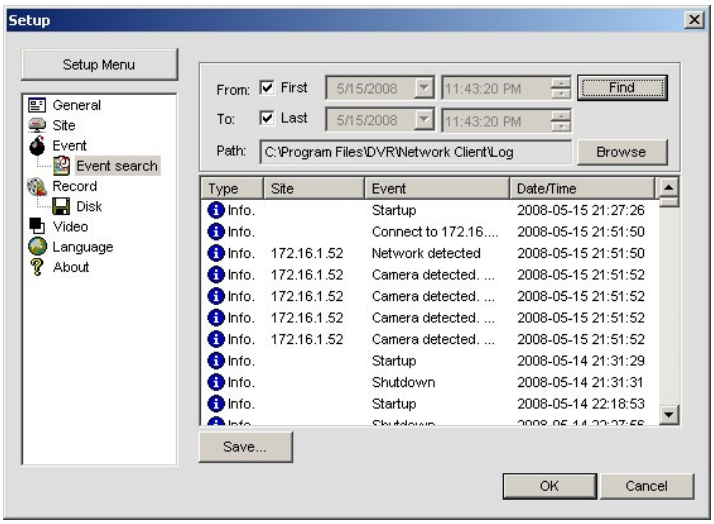
Setting Event

Set the record path and the size of local disk space for the log files.



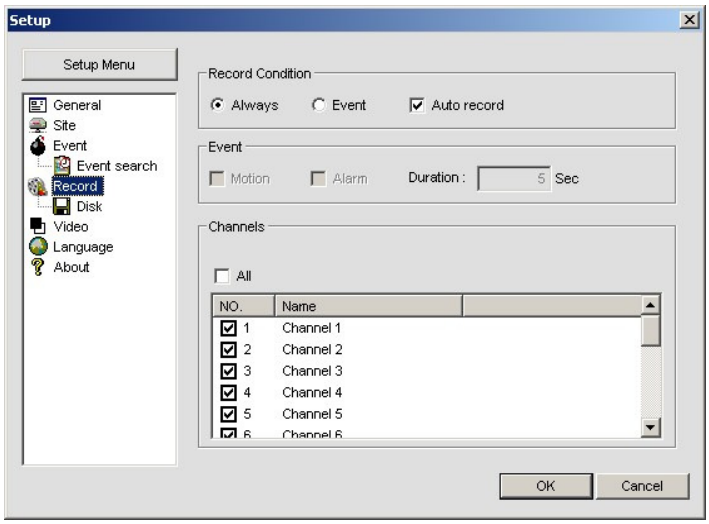
- LOG – Select to save event log into ‘log file’.
- ICON – Select to display the event on live video.
- EVENT LIST – Select to show the event in the ‘Event List” window of live mode.

Search and check the recorded log data.

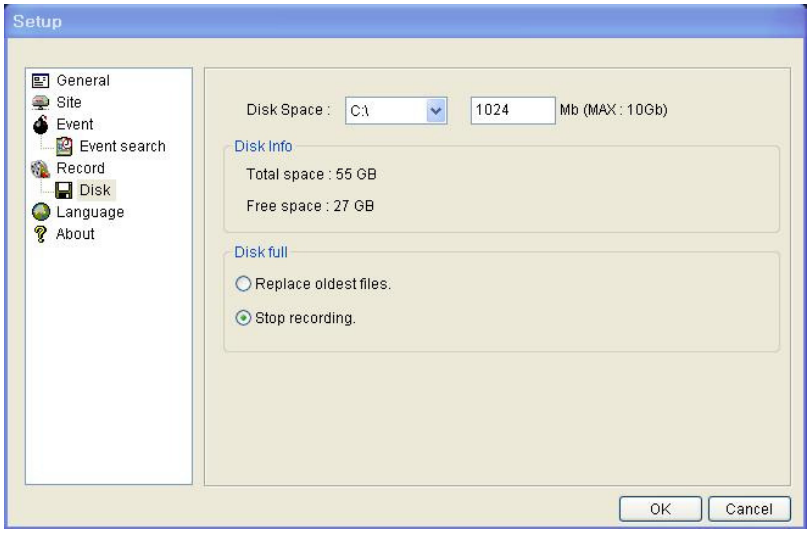


Setting Record

Set the recording conditions and select channels to record.



Select the local disk to use and the amount of disk space you want to allow the program to use for recording.



9. Network access using the Exclusive network viewer, UMS multi

9-1. Overview

The UMS Multi-Client is a multiple site monitoring client software with; video, audio, and alarm signals from the DVRs over networks. The UMS Multi-Client does not limit the number of DVR units to register.

The program displays to up 256 live videos on one display and even playback videos window on the same or another display monitor.

On the program, user may control PTZF cameras on the DVRs. By attaching a microphone and speaker system to devices on site, user may make bi-directional audio communication over the network.

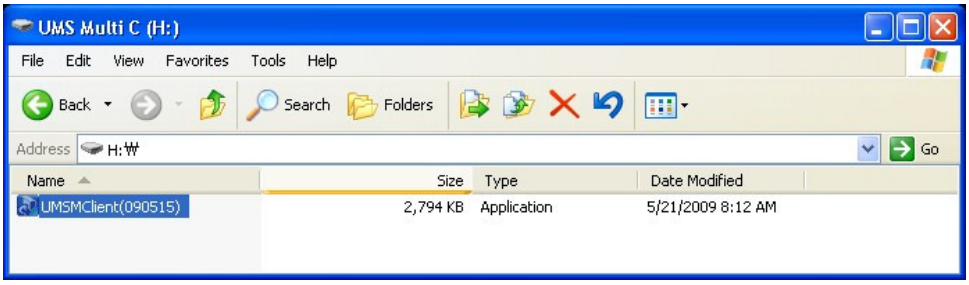
9-2. Minimum PC requirements

CPU	Intel Pentium Ⅳ
	2Ghz
Memory	512MB or Higher is recommended.
VGA	128MB or Higher is recommended.
Resolution	1024x768
Disk space	1GB
OS	Windows 2000, XP Professional, XP Home, Vista (Some versions of Vista has problem in installation. Please contact your vendor for more information.)
Network	10/100Base T
Others	Direct X 8.1 or Higher

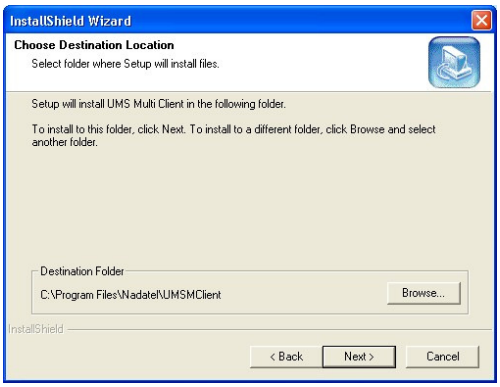
Before installing the program, check the PC specifications. The DVR remote software may not perform correctly if the PC does not meet the minimum requirements.

9-3. Installing the program

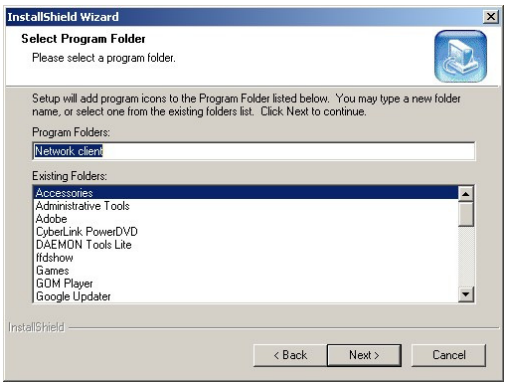
1. Insert the provided CD in the CD drive and double-click “UMSMultiClient (XXXX)**.exe**”


UMS Multi C (H:)
File Edit View Favorites Tools Help
Back Search Folders
Address H:₩
Go
Name Size Type Date Modified
UMSMClient(090515) 2,794 KB Application 5/21/2009 8:12 AM

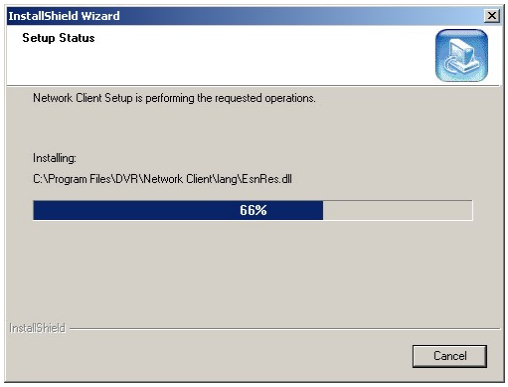
2. Select a destination folder and click “Next”.


InstallShield Wizard
Choose Destination Location
Select folder where Setup will install files.
Setup will install UMS Multi Client in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\Nadatel\UMSMClient
Browse...
InstallShield
< Back
Next >
Cancel

3. Select the program folder and click “Next”.



4. The setup status screen is displayed.



5. After the installation is completed, **“UMS Multi Client”** icon displays on the desktop screen.

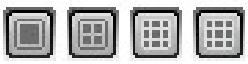
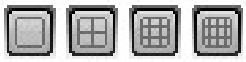
9-4. Live Window

When installation is completed, double click the **“UMS Multi Client”** icon on your desktop to start the program.

9-4-1. Main user interface

9-4-2. Control buttons

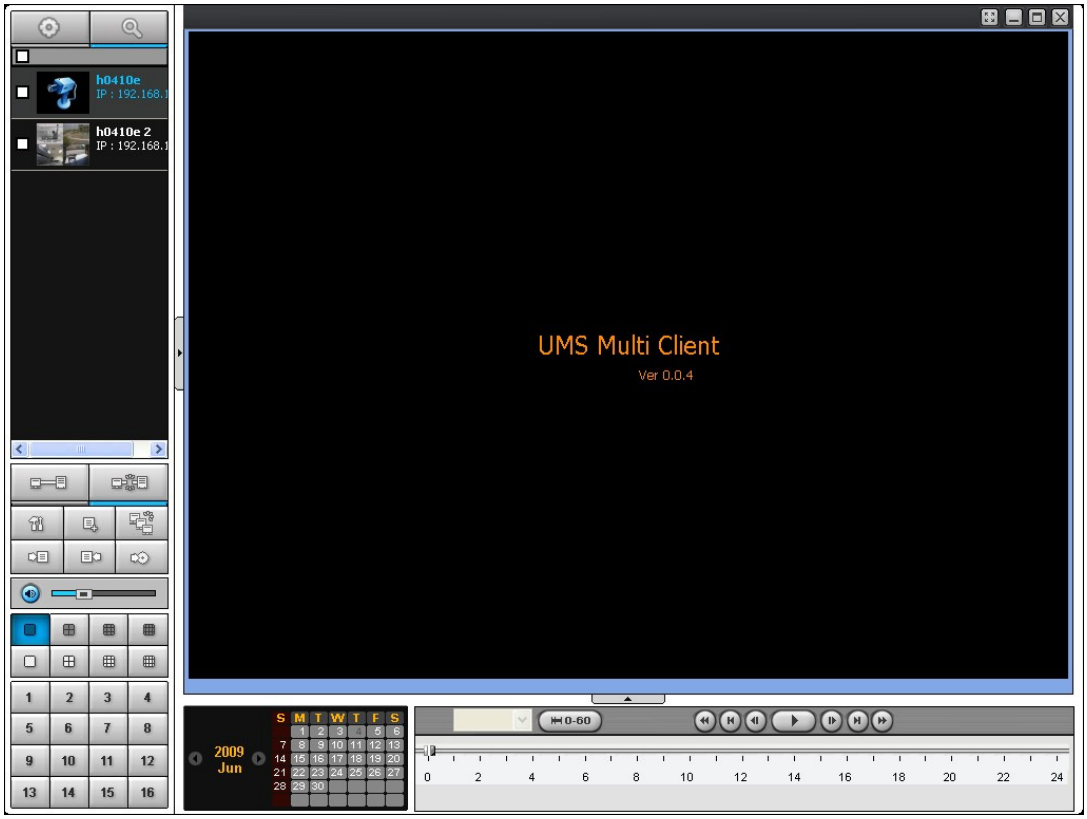
Button	Description
LOCAL PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in local PC.
REMOTE PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in remote DVR.
SITE MANAGEMENT	THUMBNAIL REFRESH: Click this icon to refresh and renew thumbnail image of every connected site. SITE ADDITION: Click this icon to open 'Site Addition' window. SITE DELETE: Click this icon to delete site from the index window, after disconnect a site. NET FINDER: Select the site from the index window and click this icon to modify the information of specific site.
CONNECT	Click this icon to connect the selected site/sites.
DISCONNECT	Click this icon to disconnect the selected site/sites.
SETUP	Click this icon to setup configuration of UMS MULTI CLIENT.
CAPTURE	Click this icon to capture a still image
EVENT LIST	

PAUSE	Click this icon to play/pause live video.
ALARM ON	
RECORD ON	Enable or disable recording of live video to local disk which has set in setup menu.
AUDIO	Use the volume control bar to set the audio level.
MIC	Use the micro phone volume control bar to set the micro phone level.
	User can control PAN/TILT & ZOON/FOCUS. PAN left /right TILT up/down ZOOM in/out FOCUS in/out
 CHANNEL SPLIT	To select the numbers of display channel/channels (Single, quad, 9 channels, and 16 channels) of highlighted site.
 DVR SITE SPLIT	To select the numbers of DVR/DVRs (1 DVR, 4 DVRs, 9 DVRs, 16 DVRs) on main display screen.

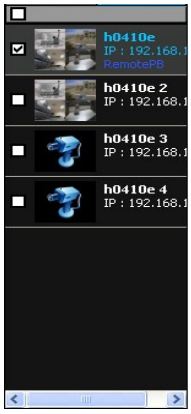
9-5. Search and Playback Window

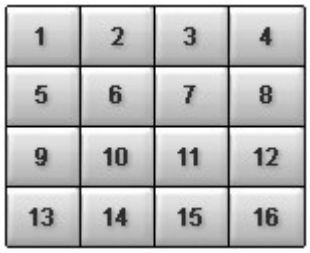
9-5-1. Main user interface

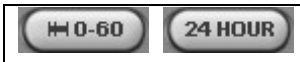
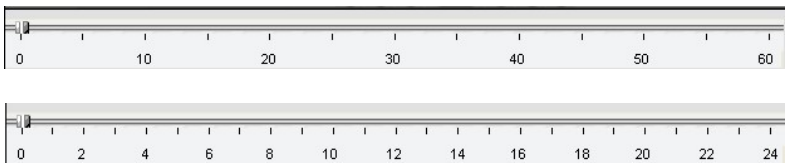
You can access to search window by clicking the search icon (Local Playback / Remote Playback) on the upper left of Live Window.



9-5-2. Main control panel

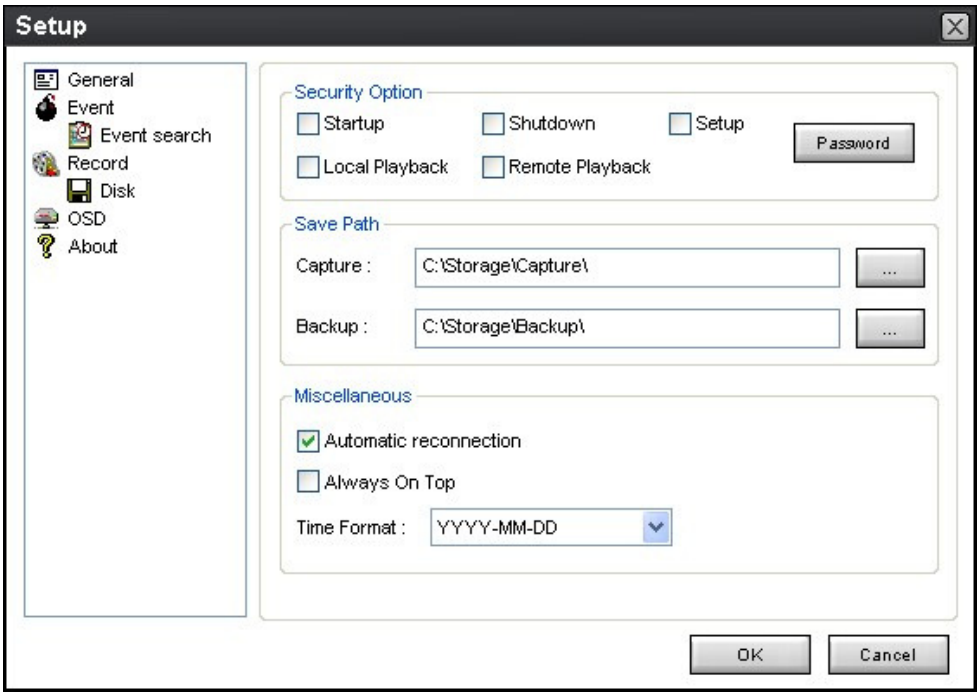
Button	Description
LOCAL PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in local PC.
REMOTE PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in remote DVR.
	Directory window shows site/sites that are pre-registered.
CONNECT	Click this icon to connect the selected site/sites.
DISCONNECT	Click this icon to disconnect the selected site/sites.

SETUP	Click this icon to setup configuration of UMS MULTI CLIENT.
CAPTURE	Click this icon to capture a still image.
EVENT LIST	
MARK IN	Click this icon to set the beginning time for backup of the recorded video in AVI format.
MARK OUT	Click this icon to set the ending time for backup of the recorded video in AVI format.
BACKUP	Click this icon to backup the recorded video in AVI format.
AUDIO	Use the volume control bar to set the audio level.
DVR SITE SPLIT	To select the numbers of DVR/DVRs (1 DVR, 4 DVRs, 9 DVRs, 16 DVRs) on main display screen.
CHANNEL SPLIT	To select the numbers of display channel/channels (Single, quad, 9 channels, and 16 channels) of highlighted site.
	To select the channel to playback.
	The calendar shows dates with recorded video in color.
	To display the recorded data of selected channel or all channels on a time line scale.

	To change a time line scale from 24 hours to 60 minutes or vise versa.  The timeline shows recorded data in color on the bar. You can adjust the time line scale and move it to the time you wish to playback. Then click the play icon to display the recorded video.
	Playback buttons.

9-6. Setup of UMS Multi Client

Click the setup icon to setup the configuration of UMS Multi Client software. The Setup window displays.



9-6-1. General

9-6-1-1. Security Option: Set a password for security options.

Select security options and set a password.

Then when you access any of selected functions, you need to enter the password.

You can also set the save path for capturing and backup.

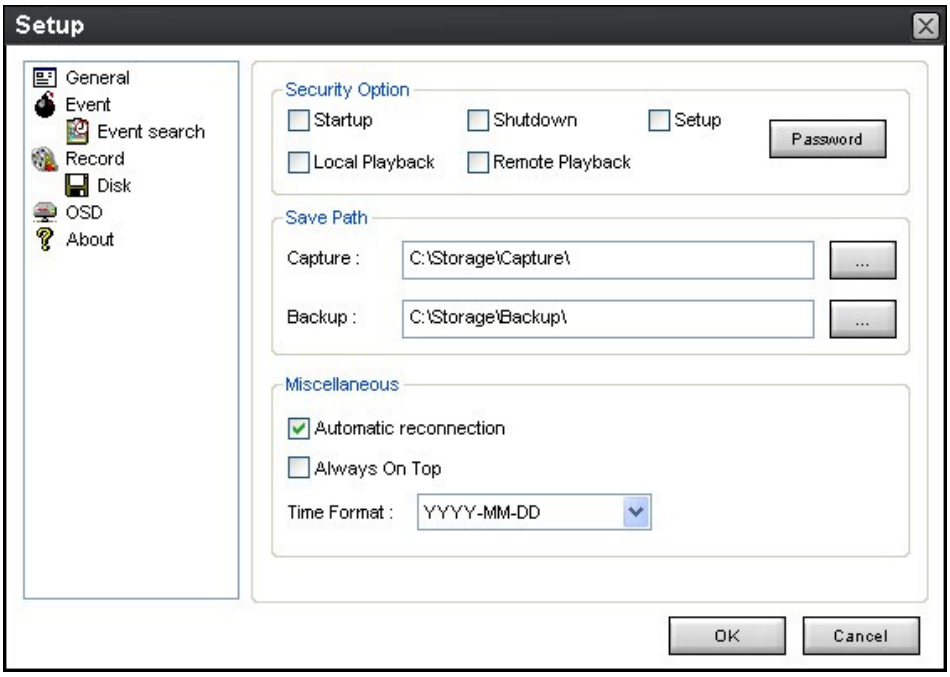
9-6-1-2. Save Path: Specify the location to save captured still image for Capture and Backup data.

9-6-1-3. Miscellaneous

Automatic reconnection: If a user selects this function, client S/W will automatically try to connect the finally connected IP address, after the network is disconnected.

Always On Top: If a user selects this function, client S/W will display continuously at the very front than other software on the PC.

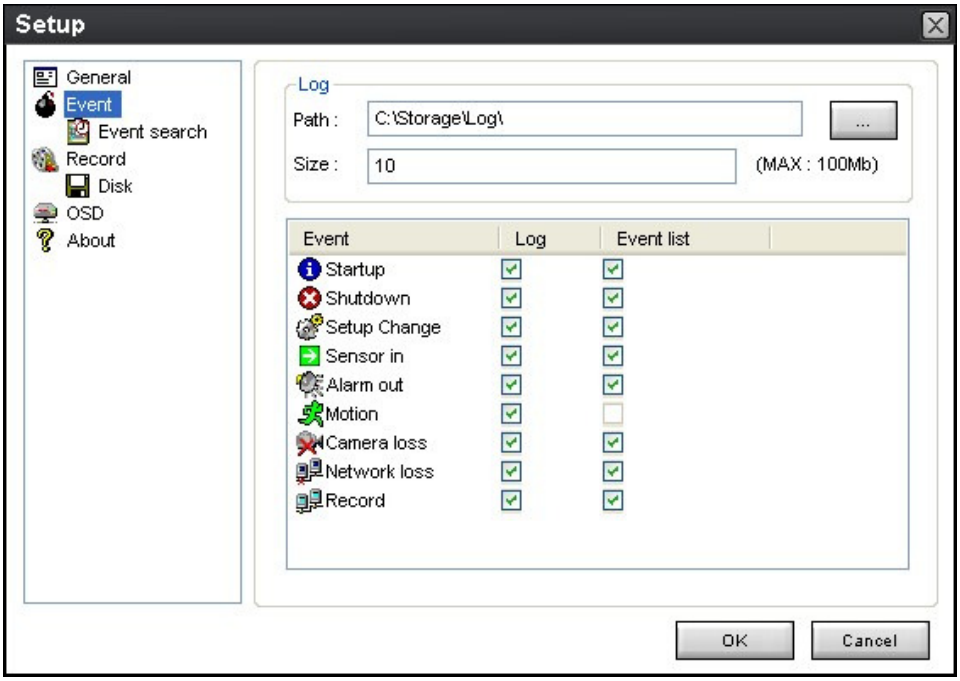
Time Format: Change the way the Client software displays the time.



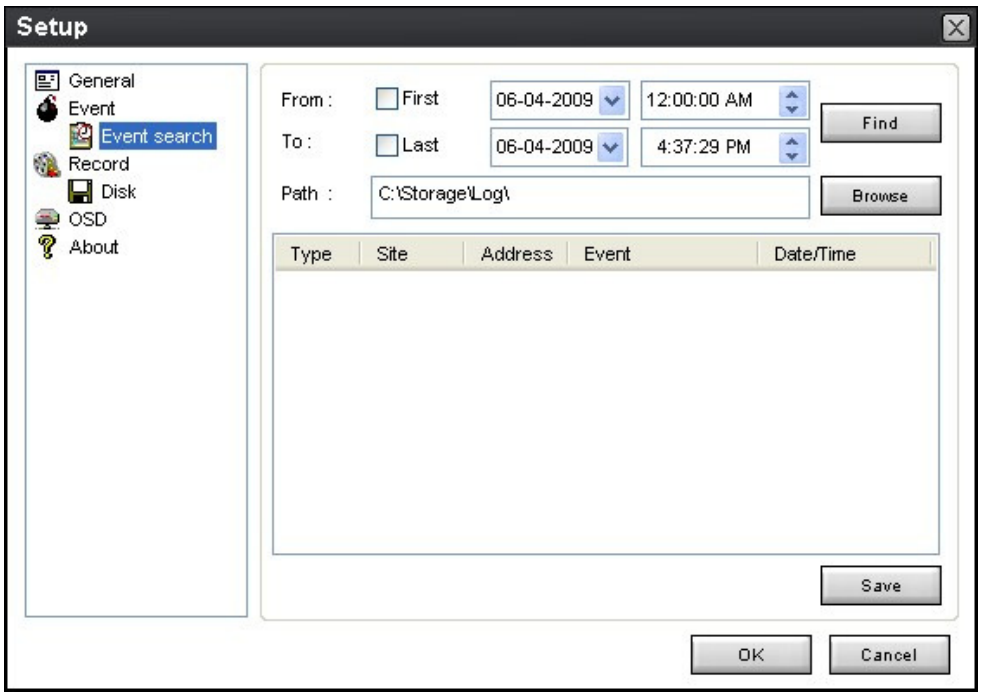
9-6-2. Event

Event log can be archived and searched.

9-6-2-1. Archiving Event Log: Specify the location to save event logs and select event to archive.



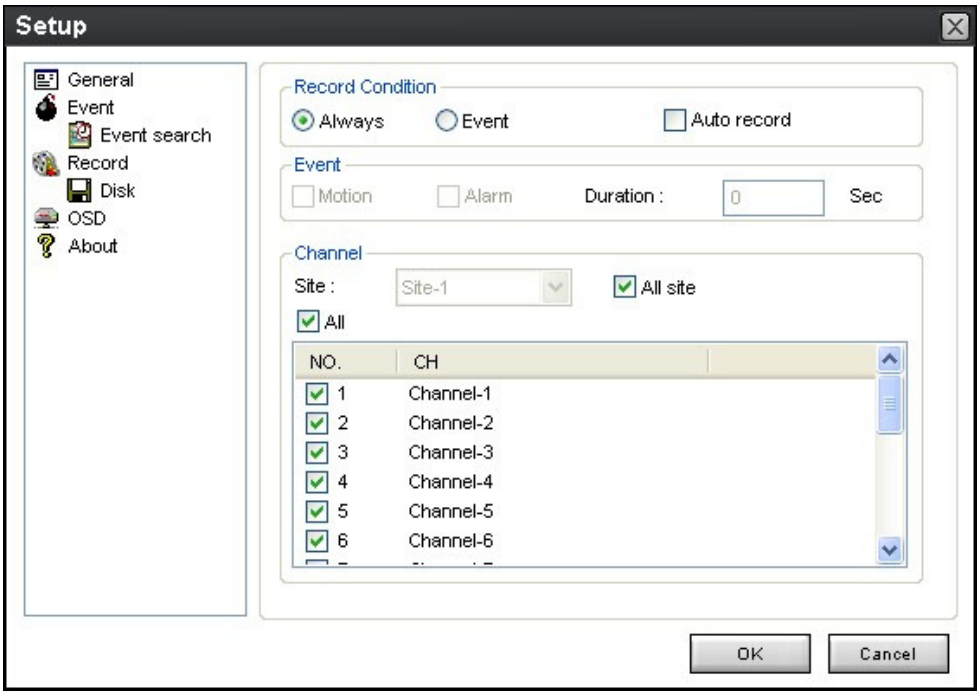
9-6-2-2. Archiving Event Log: Event log can be searched from selected time.



9-6-3. Record

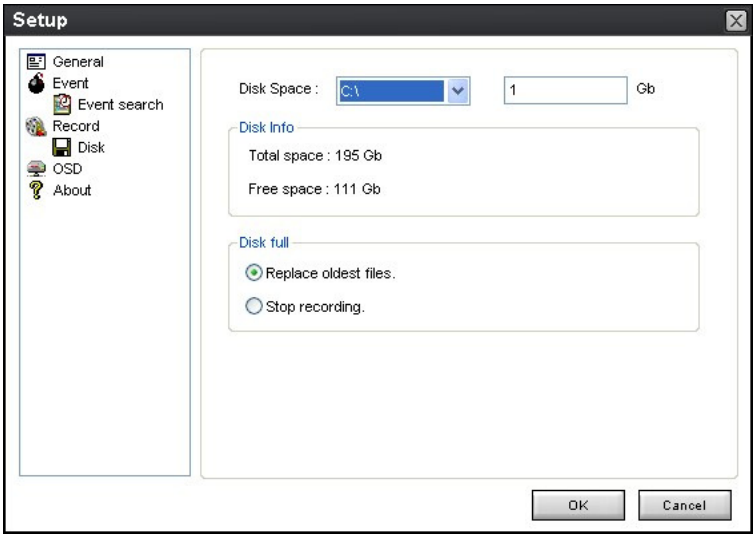
9-6-3-1. Record setup: You can set the recording conditions for Always, Event, or Auto record. And you can also select target DVR/DVRs and channel/channels.

When you set the recording condition to event, you can set event for motion or alarm with duration.



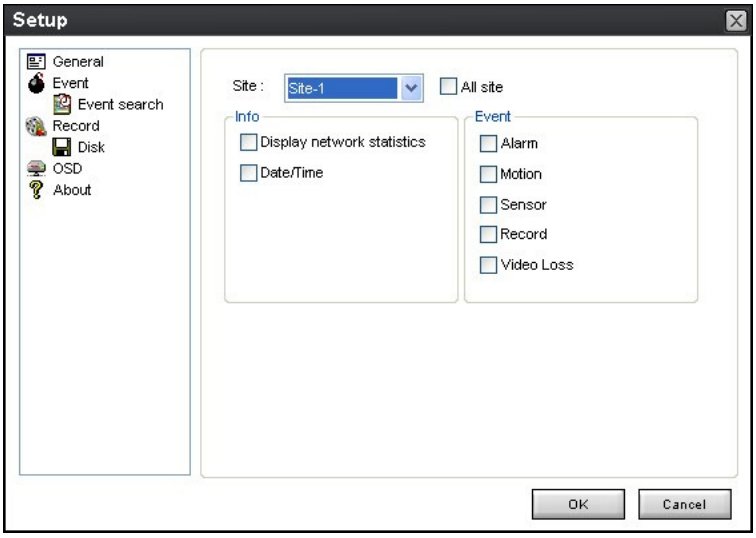
9-6-3-2. Record local storage setup: You can select the local disk to use and the amount of disk space you want to allow the program to use for recording. You can also select the option to overwrite data or stop

recording when the maximum amount of disk space is full.



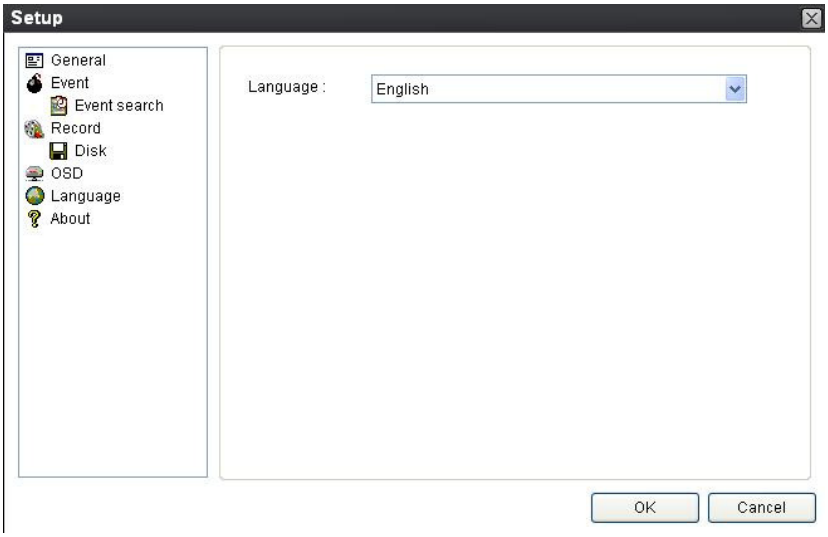
9-6-4. OSD

You can select the OSD to be display



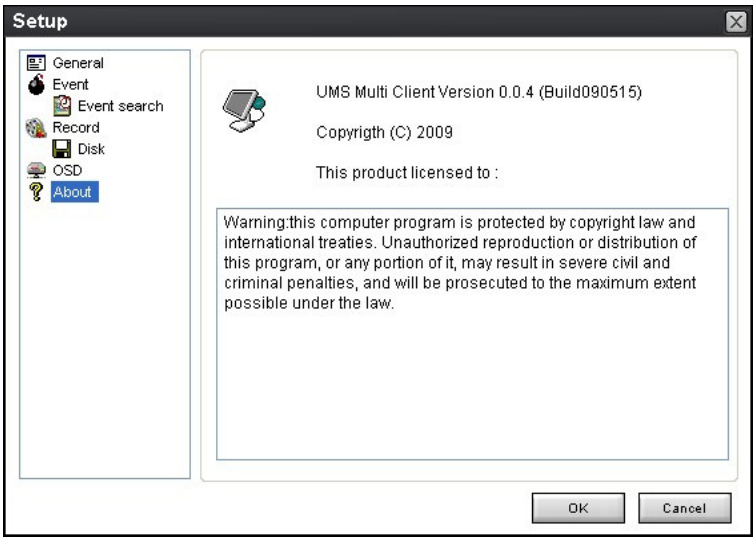
9-6-5. Language

You can select a language to be display.



9-6-6. About

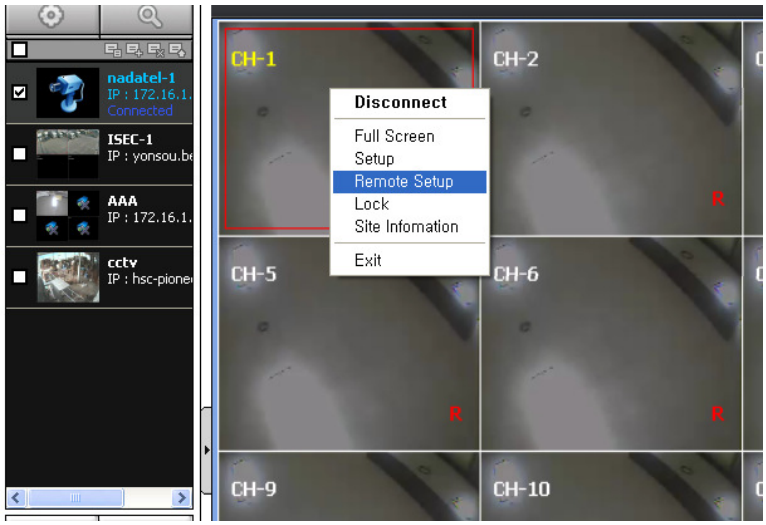
“About” provides network client version information.


Setup
General
Event
Event search
Record
Disk
OSD
About
UMS Multi Client Version 0.0.4 (Build090515)
Copyrigth (C) 2009
This product licensed to :
Warning:this computer program is protected by copyright law and international treaties. Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law.
OK
Cancel

9-7. Remote Setup

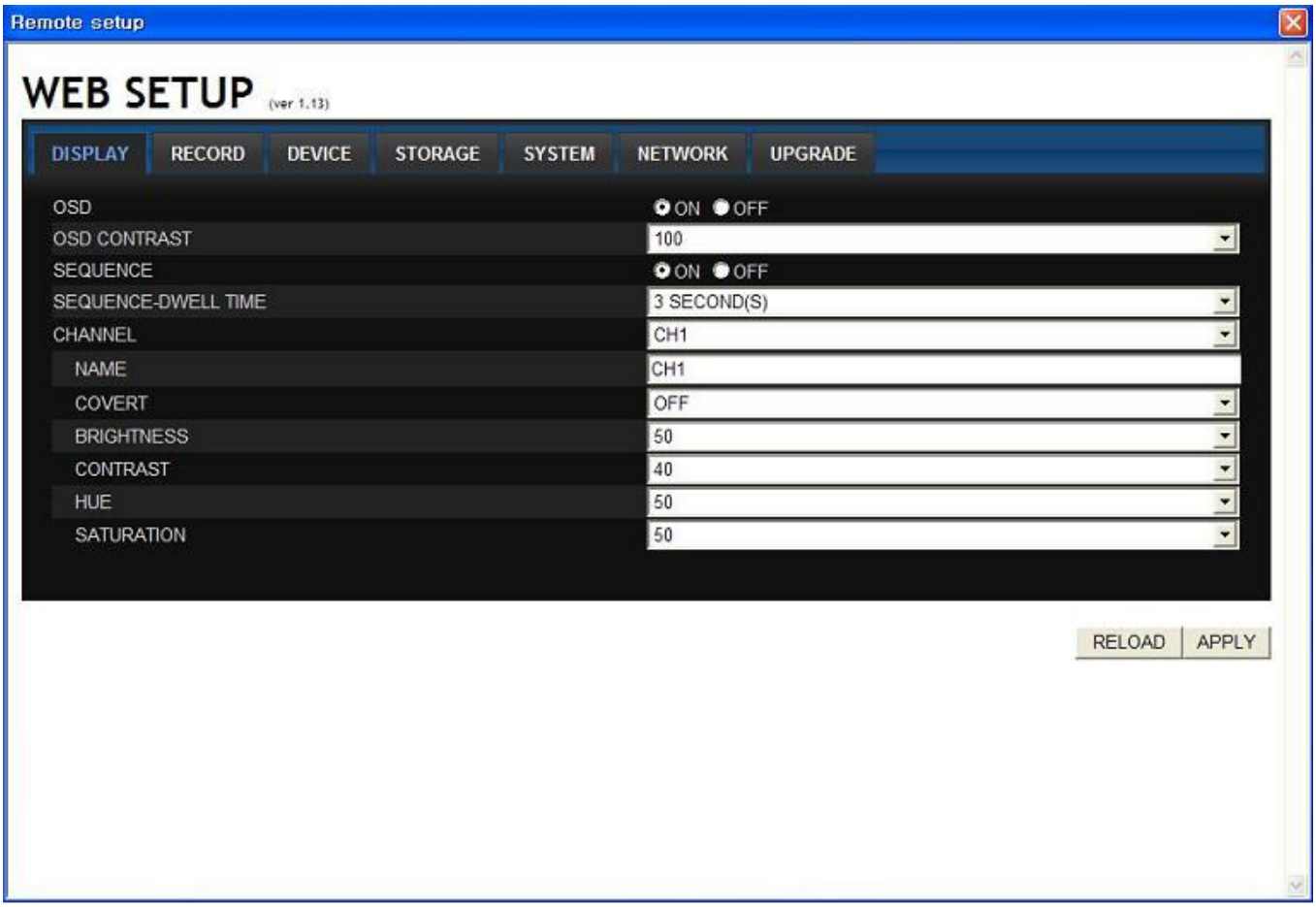
The menu settings for the DVR unit can be set from a PC, via network.

Put the cursor of the mouse on the channel which is connected to the site and press the right. Then the following window is displayed. Select the **Remote Setup**.



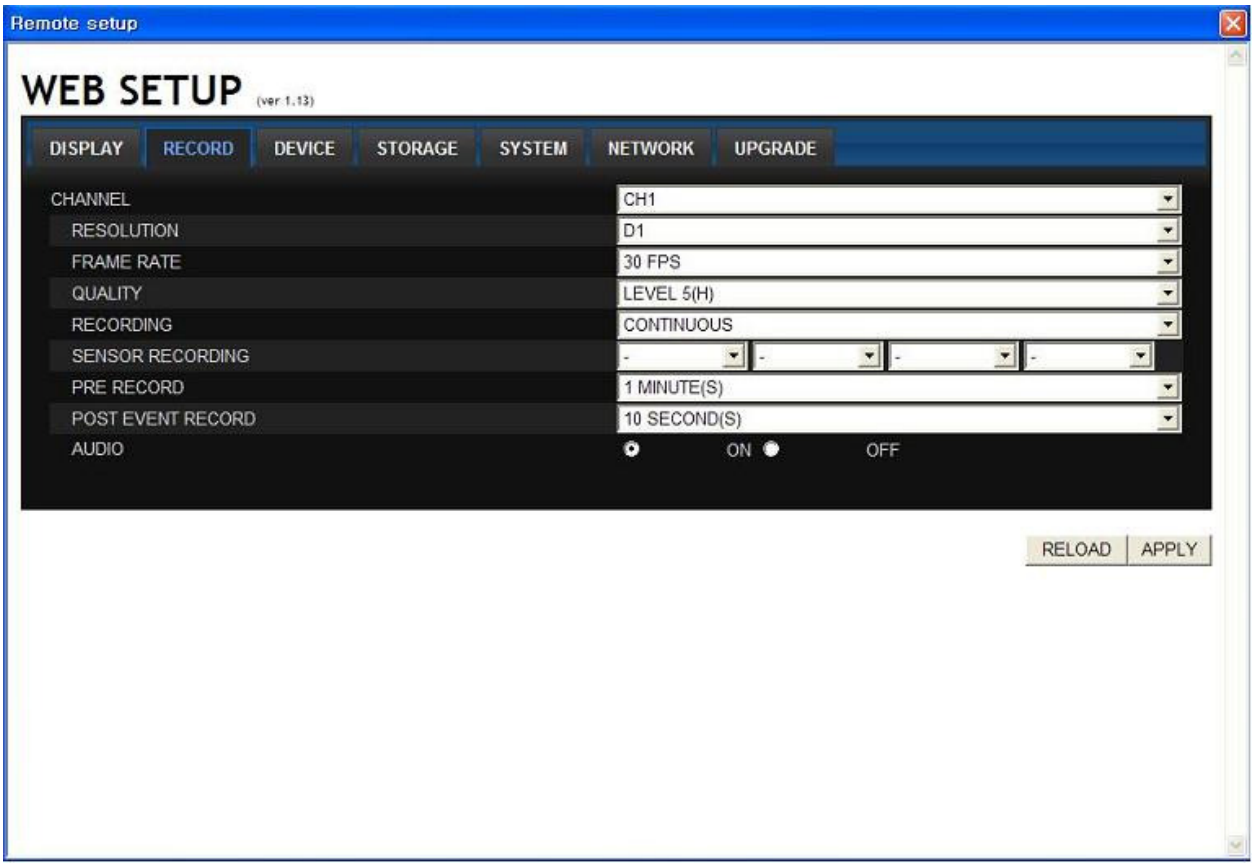
Then the setup window is displayed as follows to check the password for admin. Just admin is possible to connect to the remote setup menu. The specified menu screen is displayed on the upper side of the screen. Setting is basically the same as with the DVR menu setting.

9-7-1. Display

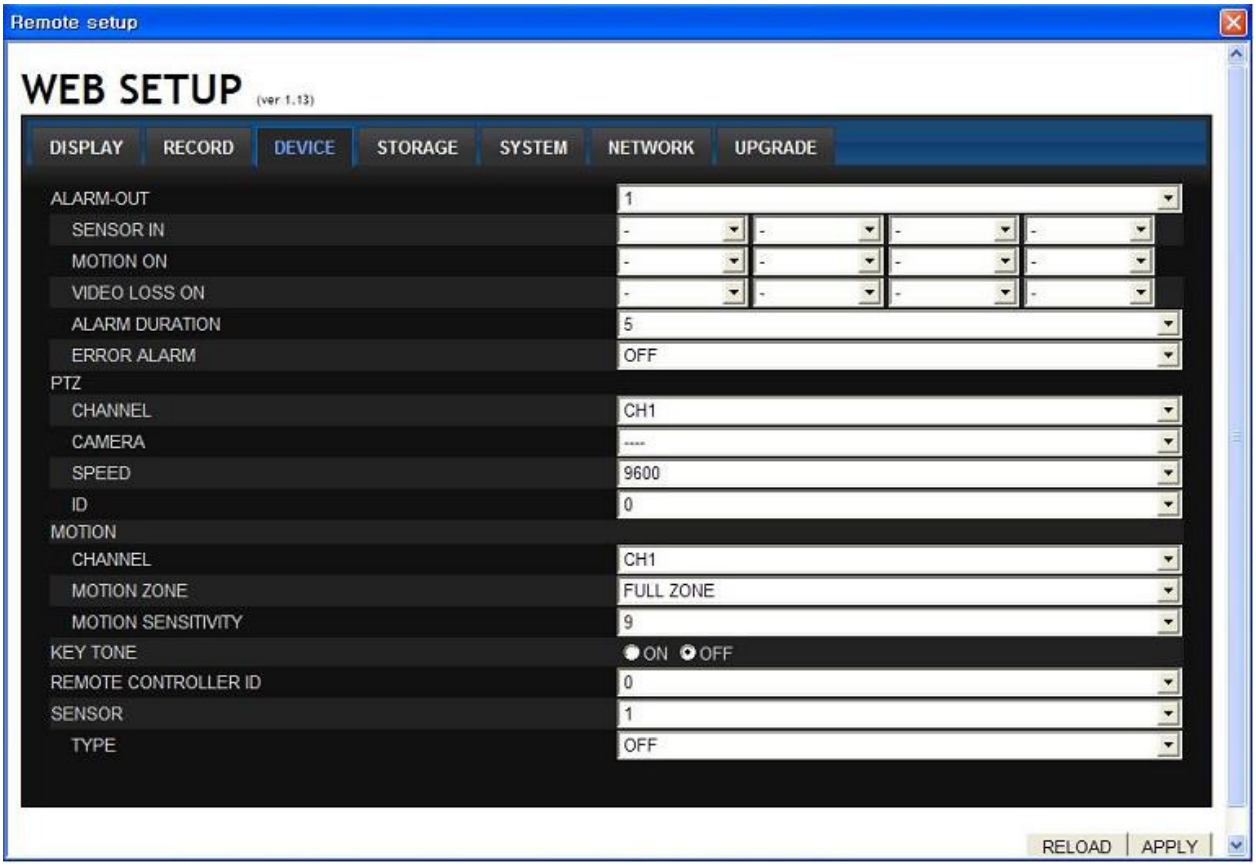


User can set the value on this remote setup page. After setting the value, please press the APPLY button. Then the value would be applied to the system without the system rebooting. RELOAD button is used when user want to bring the value in the system.

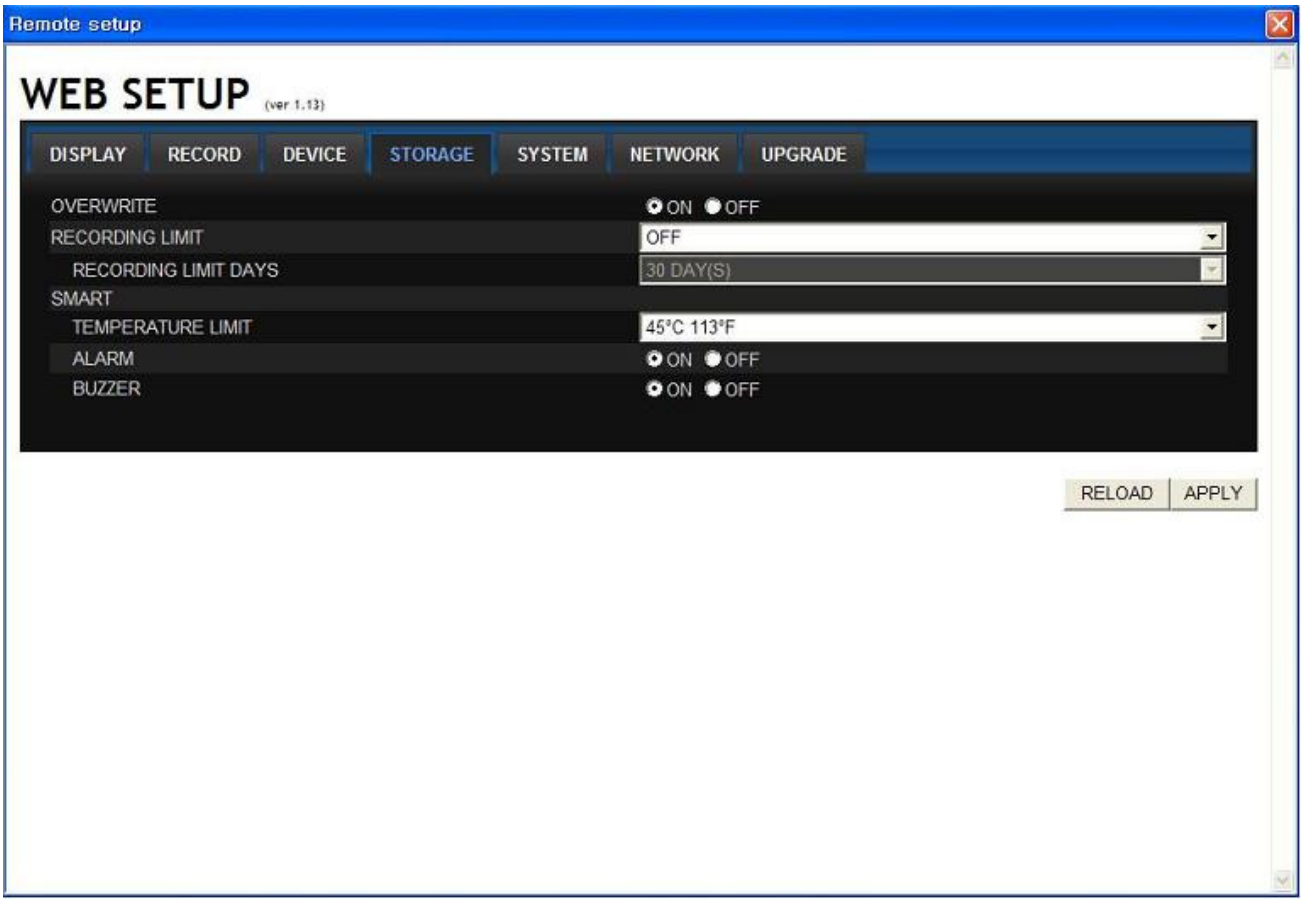
9-7-2. RECORD



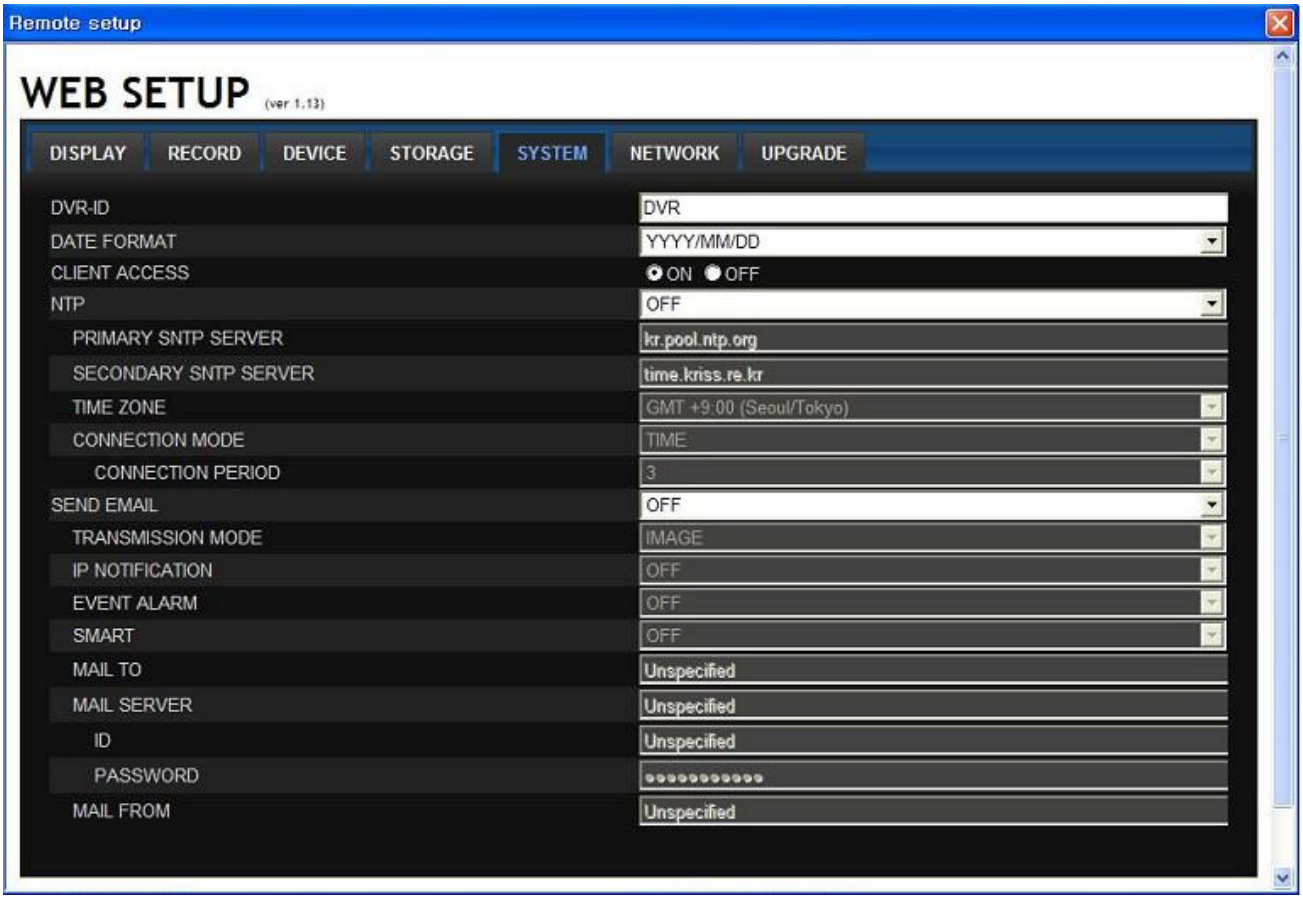
9-7-3. DEVICE



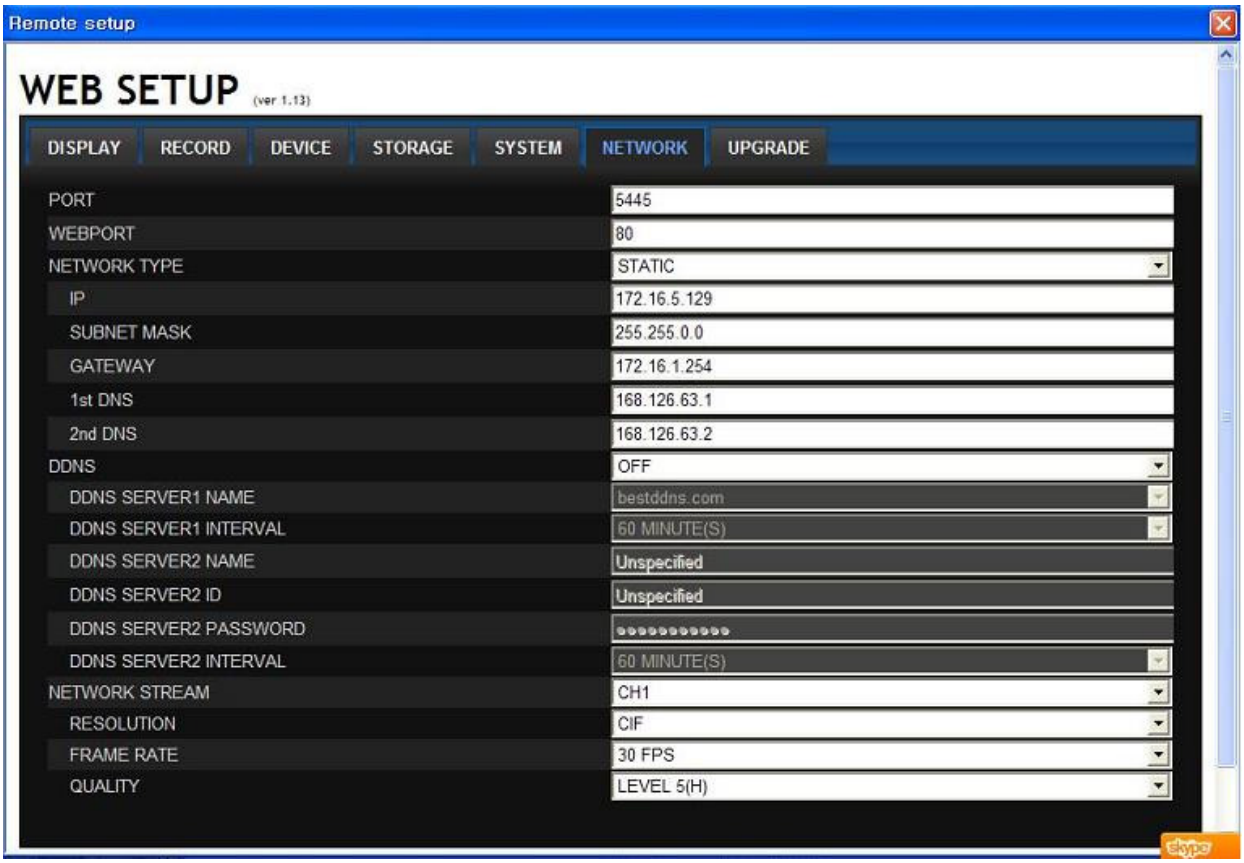
9-7-4. STORAGE



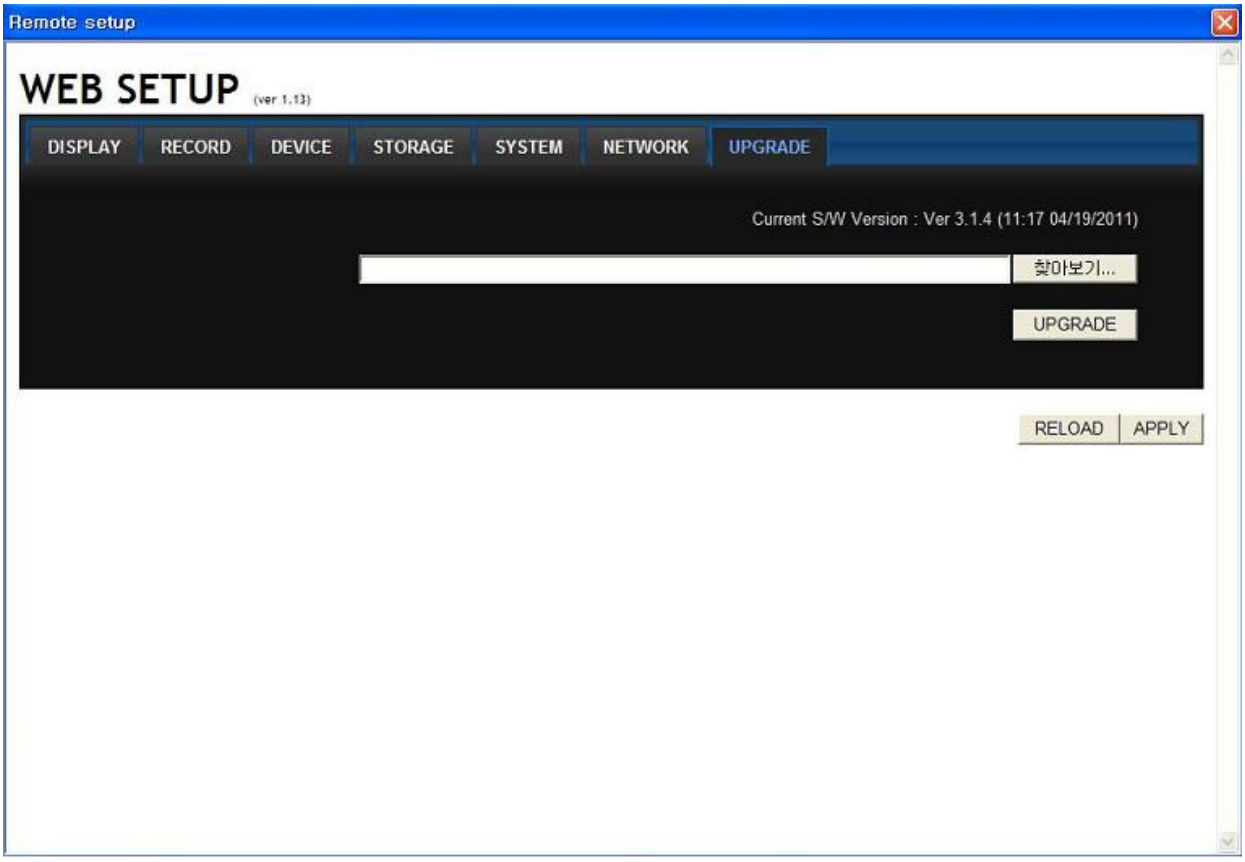
9-7-5. SYSTEM



9-7-6. NETWORK



9-7-7. UPGRADE



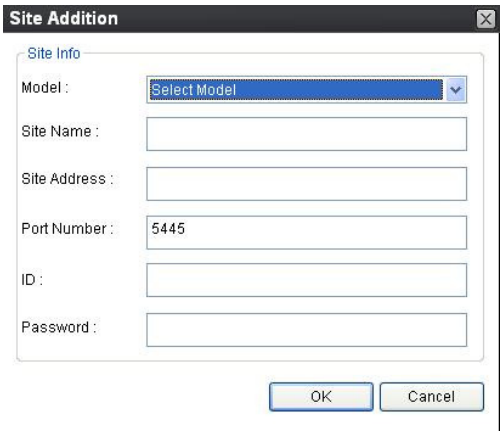
Please refer to page 54 for the Remote Upgrade.

9-8. Operation

9-8-1. Addition, Delete, and modify of DVR sites

9-8-1-1. Addition of sites

1. Click SITE ADDITION button. And then the following window displays.



- Model: User has to select surely a suitable type.
  SDVR series, H series DVR
  N series DVR, HD DVR
  IP Camera
- Site Name: Input a name that properly describes a site.
- IP Address: Input IP address (Public IP address of a router that DVR is connected.) or Domain name that is registered at www.okddns.com (for Korea), www.ddnscenter.com (for USA) or www.bestddns.com (for other area including EU)
- Port No.: Input port number of DVR.
- ID: Input ID of DVR.
- Password: Input network password of DVR.

2. Click OK button. And then the registered site is added on the directory window.

9-8-1-2. Delete of sites

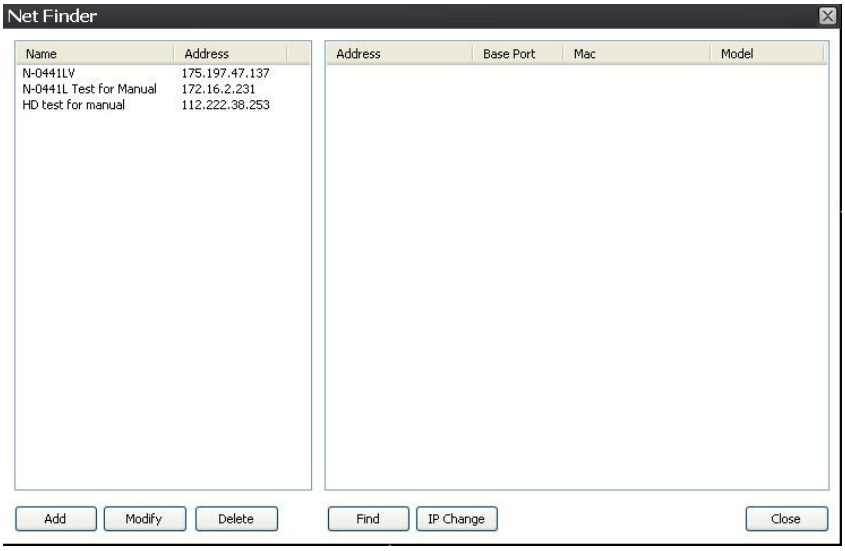
1. Select the site/sites to delete from the directory window.

2. Click SITE DELETE button. And then the selected site/sites is/are deleted.

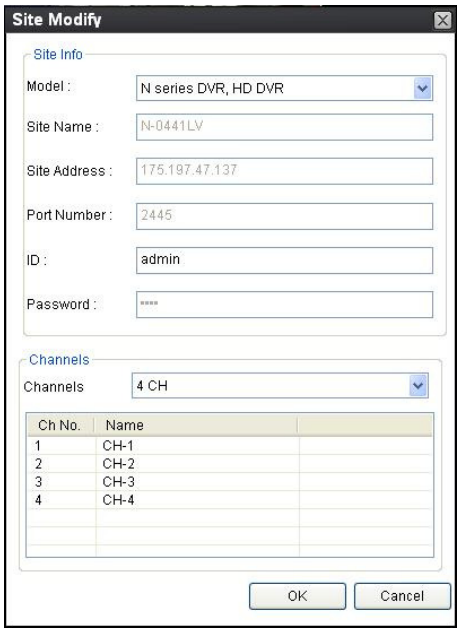
9-8-1-3. Modify of sites

1. Select the site/sites to modify from the directory window.

2. Click NET FINDER button. And then the following window displays.



3. Click MODIFY button. And then the modified information is applied.



9-8-2. Connect and Disconnect

9-8-2-1. Connect

1. Select site/sites to connect from the directory window.

2. Click CONNECT button, and then site/sites displays/display as connected.

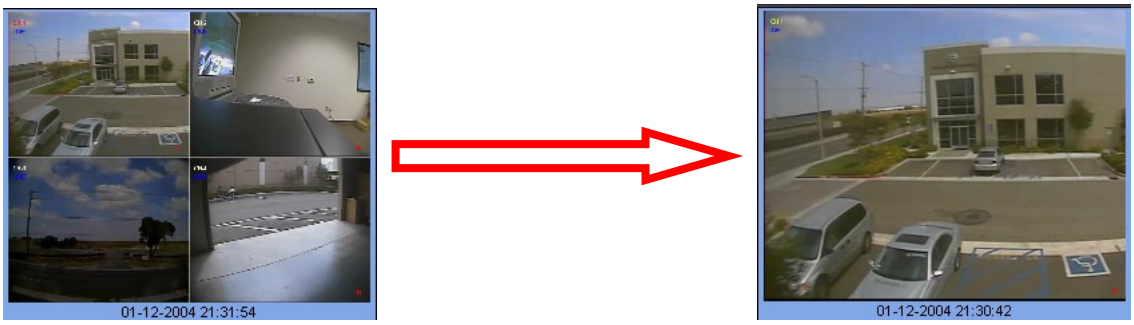
9-8-2-2. Disconnect

1. Select site/sites to disconnect from the directory window.

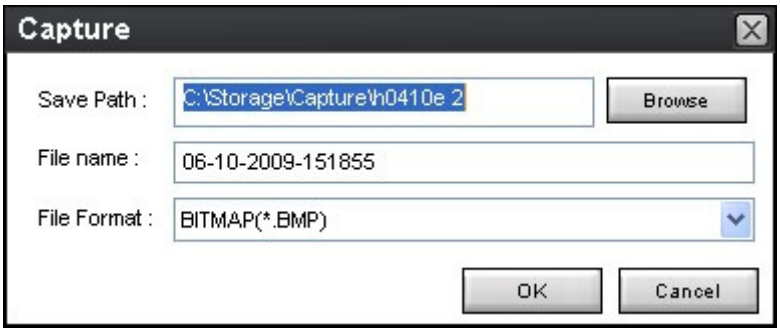
2. Click DISCONNECT button, and then selected site/sites disconnected.

9-8-3. Still-image capture during Live

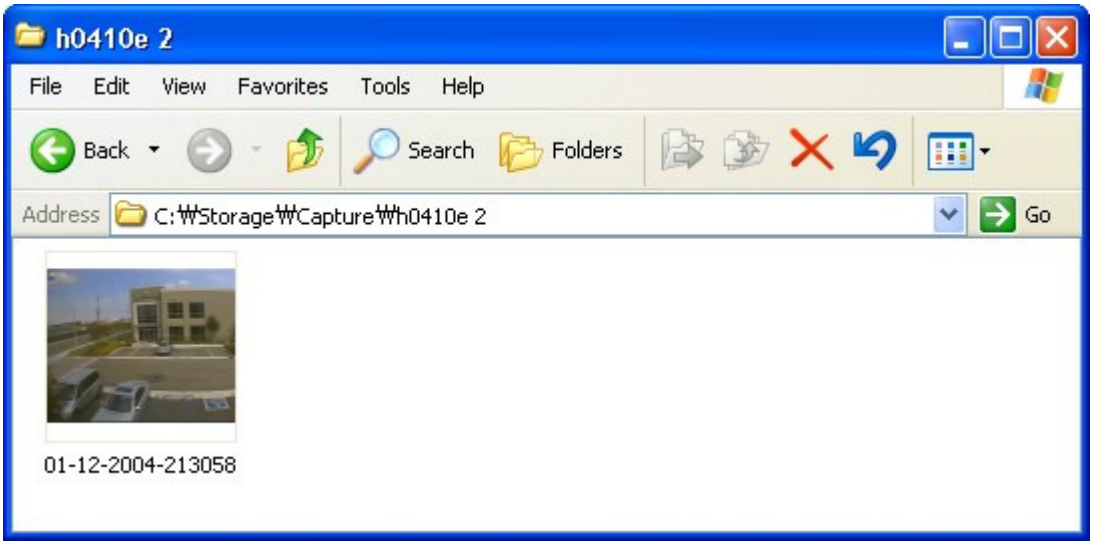
1. Double-click a channel to capture from the display screen. (Otherwise all channels will be captured.).



2. Click CAPTURE button. And then a Capture window displays.

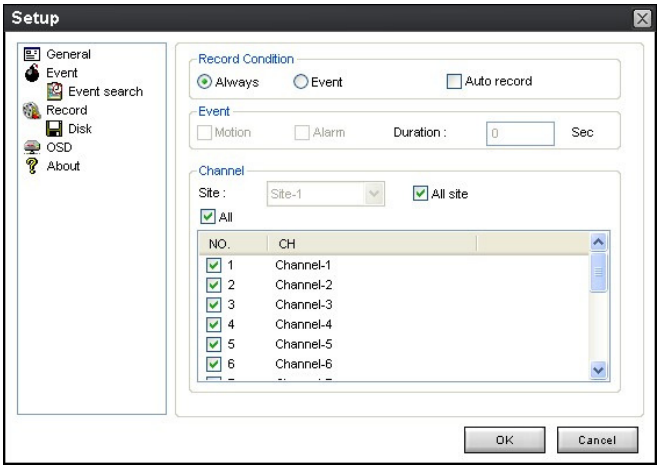


3. Set Save path, File Name, and File Format. And then click OK button.
4. Still image is saved as set in Capture window.

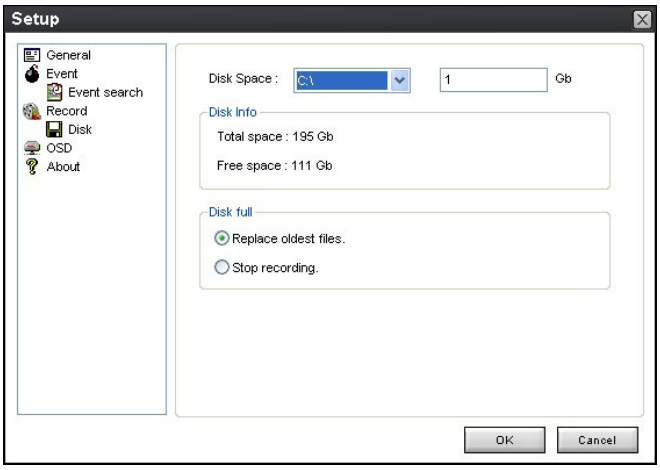


9-8-4. Recording video on local PC during Live

1. Click SETUP button. And then a setup window display.
2. Select Record and set the values.

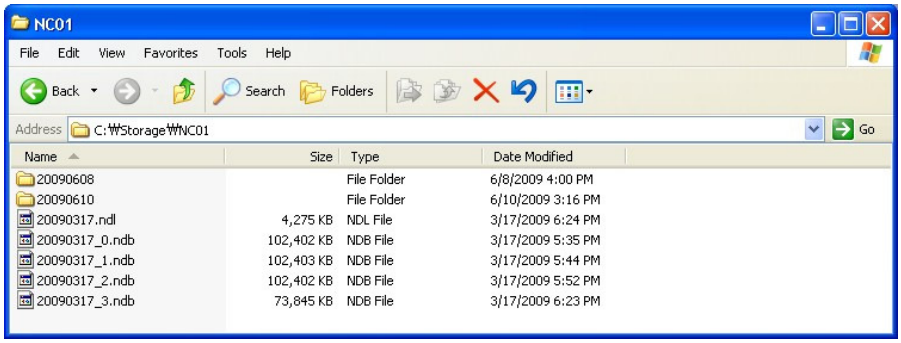


3. Select Disk and set the values.



4. Click RECORD ON button. And the color of button is changed.

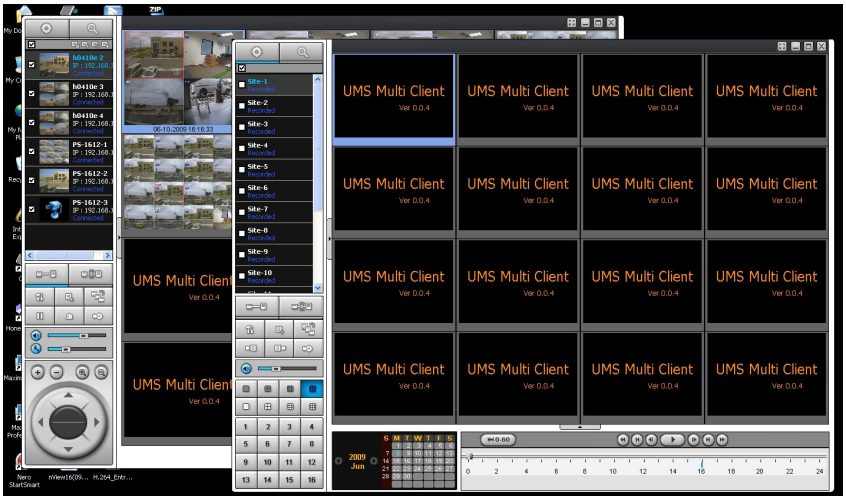
5. Live video data is recorded as set in Record and Disk setup. These video data can be searched and play-backed with Local Playback.



9-8-5. Local Playback and Remote Playback

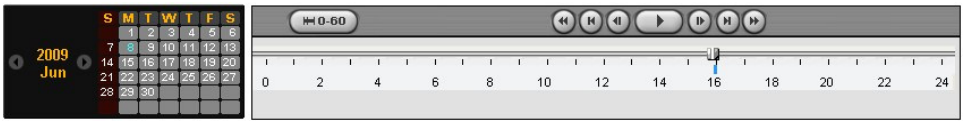
9-8-5-1. Playback of recorded video on local PC

1. Click LOCAL PLAYBACK button. And then Playback Window display over Live Window.



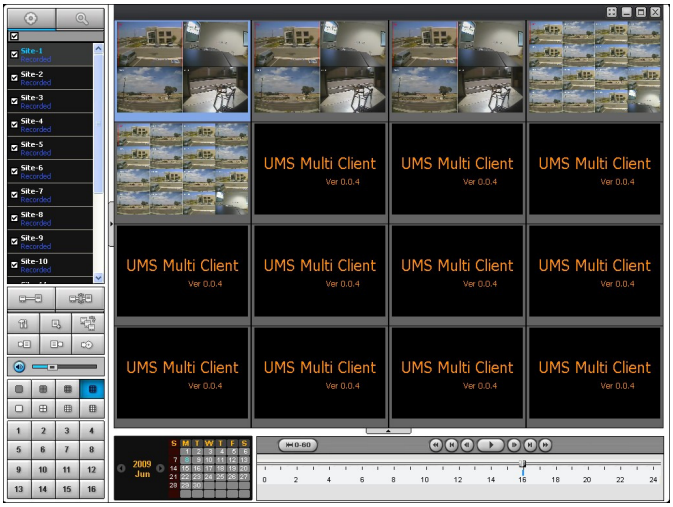
2. Select site/sites to connect from the directory window.

3. Click CONNECT button. And then Green bar displays on Search calendar and slide window.



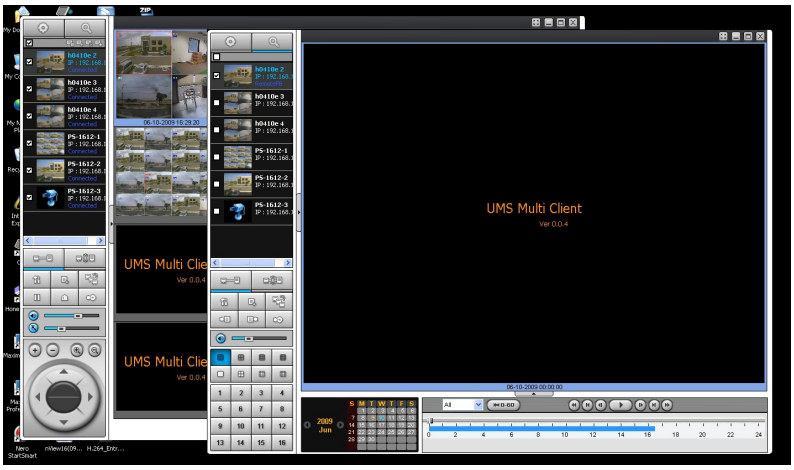
4. Move scroll bar on where there is video data and Play button.

5. Video data that is recorded on local PC will be play-backed.



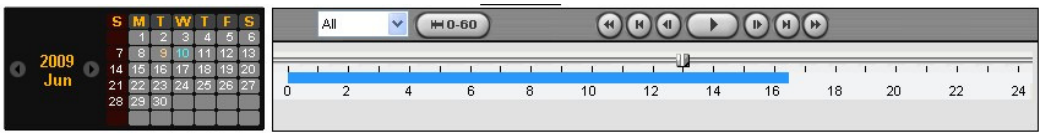
9-8-5-2. Playback of recorded video on remote DVR

1. Click REMOTE PLAYBACK button. And then Playback Window display over Live Window.



2. Select site to connect from the directory window.

3. Click CONNECT button. And then Green bar displays on Search calendar and slide window.



4. Move scroll bar on where there is video data and Play button.

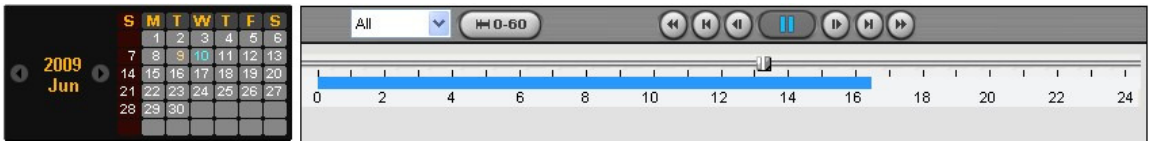
5. Video data that is recorded on a remote DVR is play-backed.

9-8-6. AVI Backup during playback

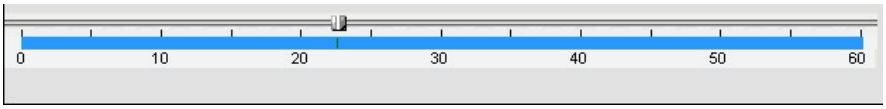
You can back up the recorded videos in AVI format during playback.

1. Double-click the target channel to backup.

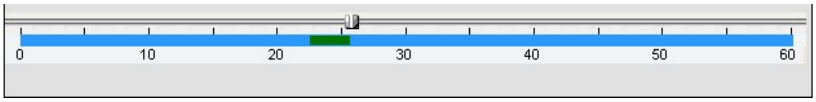
2. Select the beginning time by using the search calendar and slide bar.



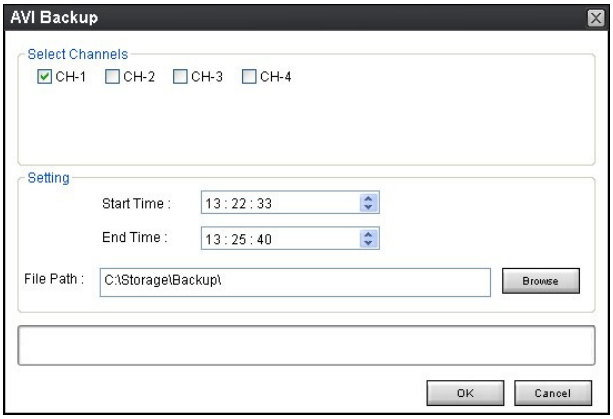
3. Click MARK IN button, when the scale of the timeline is located on the target time as the beginning time of backup.



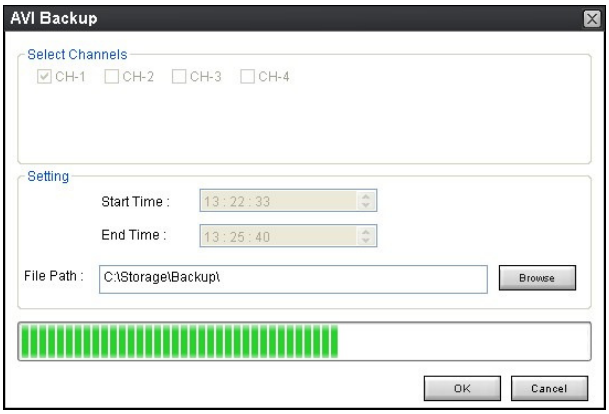
4. Set the ending time on the blue timeline by dragging the scale on the target time as the ending time of backup and clicking MARK OUT button. Then, color of the timeline between the beginning time and ending time will be changed into dark Green.



5. Click BACKUP. And then the window appears as below.



6. You can also set the beginning time and ending time on this window. After selecting a channel for backup, click the OK button. The backup will begin.



7. AVI video data is recorded as set in AVI Backup window. AVI format video can be played back by Window Media Player™ or other media player that is compatible with AVI format video.

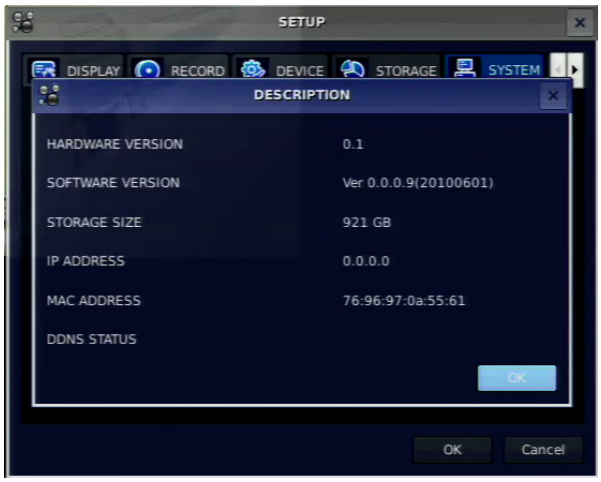
Notice

When it does a backup with NSF format, user can do a playback using the DVR player. The DVR player is installed with the S/W in user's PC.

10. Network – By an web-browser viewer

The DVR provides a live remote monitoring feature by web-browser viewer.

1. Check the IP address of the DVR from SETUP>SYSTEM>DESCRIPTION>IP ADDRESS.



2. Input the IP address or Domain name address that you pre-registered on www.bestddns.com on the address field and press "Go". Please pre-register on www.okddns.com in Korea and on www.ddnscenter.com in USA.

3. Click this bar. Then the dialog box is displayed.

4. Click “Install” to download ActiveX control.

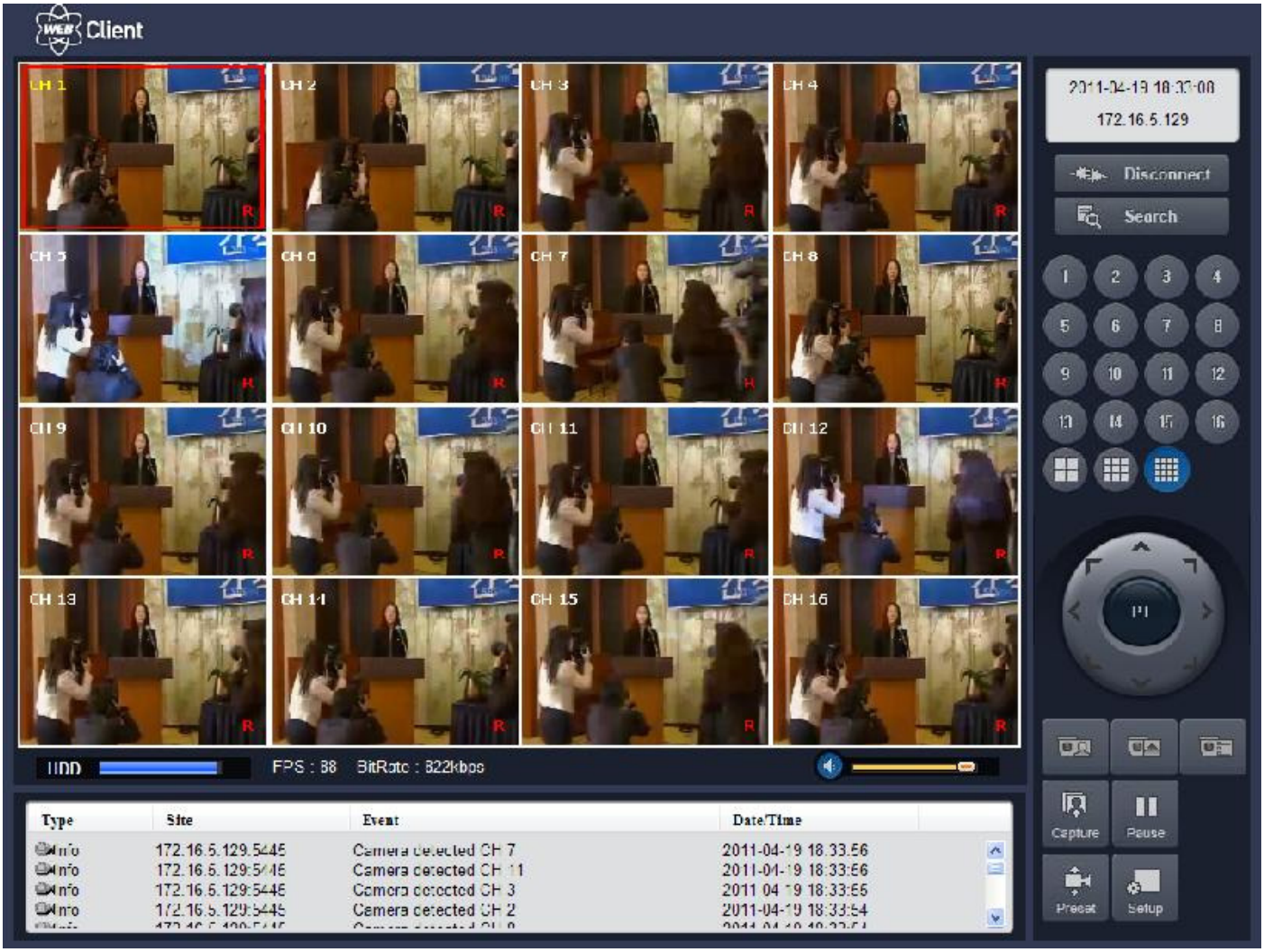
Internet Explorer - Security Warning
Do you want to install this software?
Name: WebViewer
Publisher:
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

5. Web Browser Viewer is displayed as bellow.

6. Click CONNECT button on the Left upper corner of web-viewer. Then “Connect” dialog is displayed. Enter IP address (or Domain name address that you pre-registered on www.bestddns.com, www.okddns.com or www.ddnscenter.com, Port number and Password and click “Connect”

- Server address: Input IP address of the DVR from SETUP>SYSTEM>DESCRIPTION>IP ADDRESS or Domain name address that you pre-registered on www.bestddns.com, www.okddns.com or www.ddnscenter.com,
- Port: Input Port number (The number is set on SETUP>NETWORK>PORT.)
- ID: Input ID of DVR.
- Password: Input network password of DVR.
  (The number is set on SETUP>SYSTEM>NETWORK PASSWORD.)

7. Then the cameras connected to the DVR are displayed on the screen.



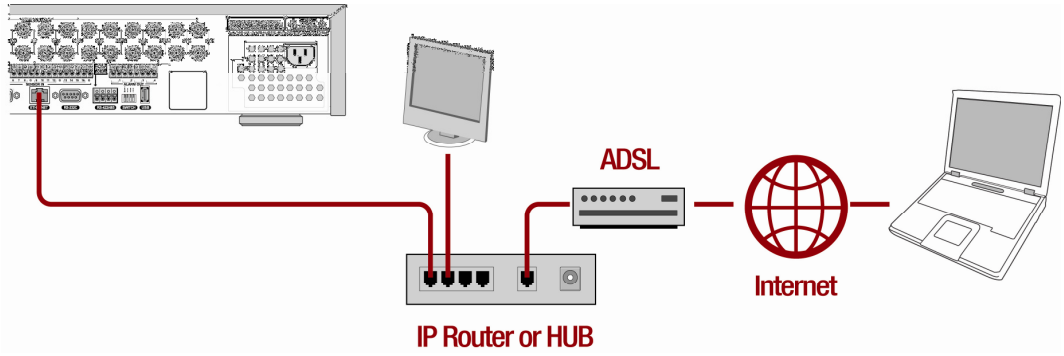
8. SETUP: The menu settings for the DVR unit can be set from a PC, via network. Refer to the detail of Remote Setup description of UMS Multi Client. Please check the detail to the page 77, Remote Setup.

APPENDIX: How to connect network

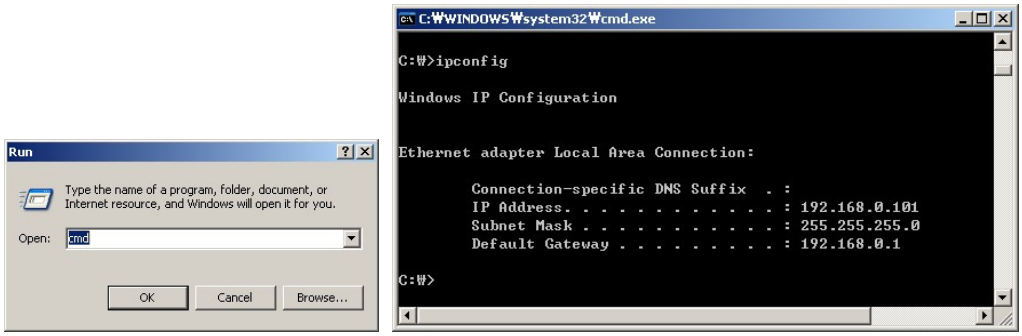
A. How to set IP address of the DVR and open TCP port of the router?

The port forwarding is dependent on the brand and model of the router. The port forwarding is required to allow access to the DVR beyond a router.

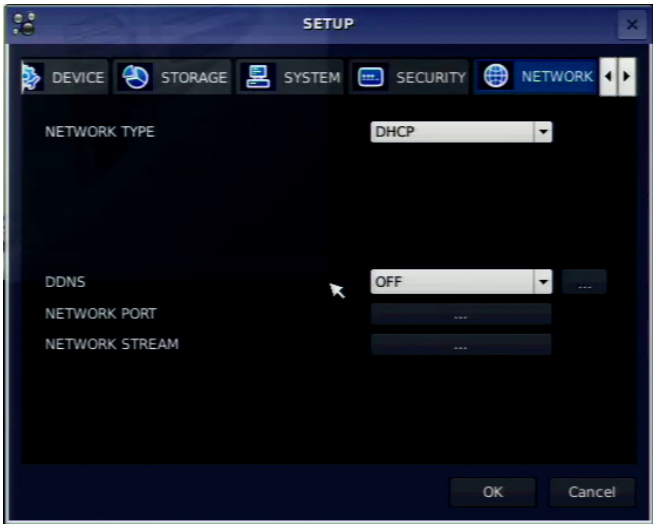
Connect network cable between DVR and Router or ADSL modem.



1. Default network setting on DVR are
   - Port: 5445
   - WEB Port : 80
   - Network : DHCP
2. From PC connected in the same Router, find IP address, Gateway, and Subnet mask by IPCONFIG command in command prompt.


Run
Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open:
cmd
OK
Cancel
Browse...
C:₩WINDOWS₩system32₩cmd.exe
C:₩>ipconfig
Windows IP Configuration
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
IP Address. . . . . : 192.168.0.101
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.0.1
C:₩>

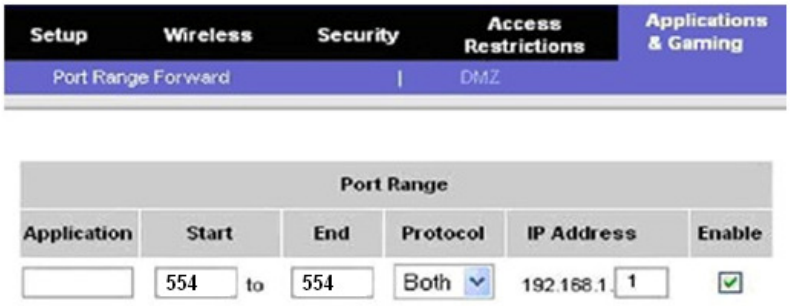
3. But if IP is something else like 192.168.x.xxx., you should change IP address, Subnet, Gateway on the DVR. Go to SETUP>NETWORK>LAN of the DVR and change the IP settings to be like IP: 192.168.XXX.XXX and Gateway: 192.168.XXX.XXX. (Refer to the user's manual of Router.)



Open your web browser. Enter the router IP address in the address bar (The router IP address are different with the brand and model.), click GO.

4. Enter the user name and password (**admin** is default) and press the **OK** button.

5. Select the Port Range Forwarding tab.



6. Enter the each field.
   i. Application: Enter a description of the DVR (Example: store1)
   ii. Start: Enter the first number of the port you need to port forward (Example: 5445)
   iii. End: Enter the last number of the port you need to port forward (Example: 5445)
   iv. Protocol: Select Both.
   v. IP address: Enter the IP address of the DVR on SETUP>NETWORK>LAN>IP ADDRESS.
   vi. Enable: Check the enable box.

7. Select the Save settings button located on the bottom of the window. Then Port forwarding is finished.

Network access beyond a router

In order to access the DVR remotely beyond a router (firewall), the user must open TCP port for command level, live channels and storage channels. User need to open 2ports numbers on the router; the DVR port number 5445 and the WEB port number 80.

If this port is not opened properly, user can not access DVR beyond a router.

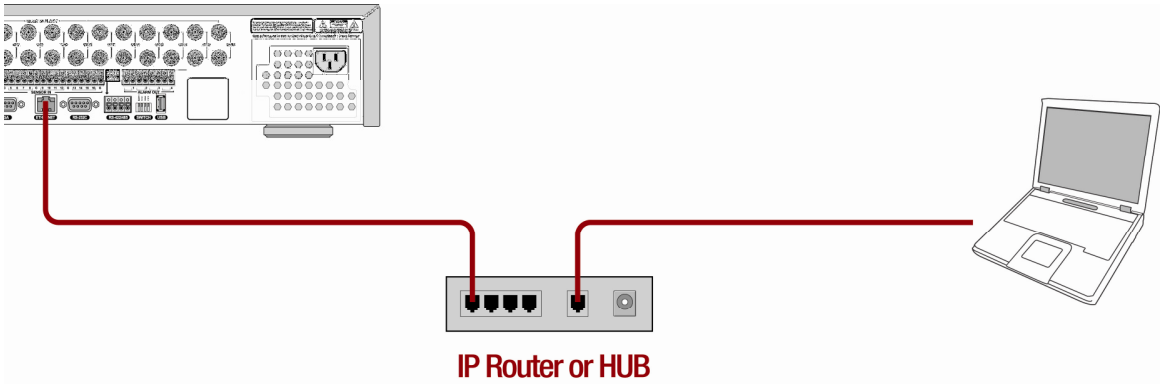
You can learn how to port forward many kinds of Routers from the bellow site.

http://www.portforward.com/english/routers/port_forwarding/routerindex.htm

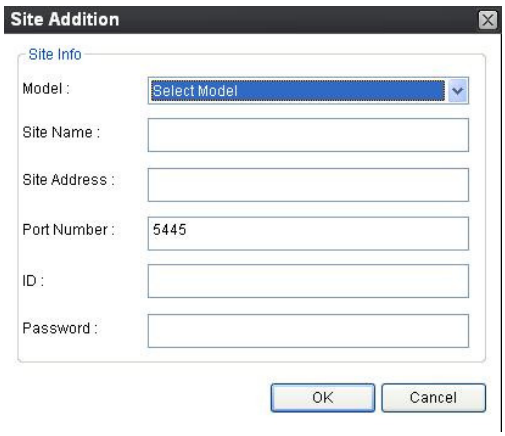
B. How to access DVR from Remote PC?

LAN Connection – Using a switching hub

Connect to the system, using a hub (Switching hub) and an Ethernet cable (10BASE-T/100BASE-TX CAT 5 LAN cable)



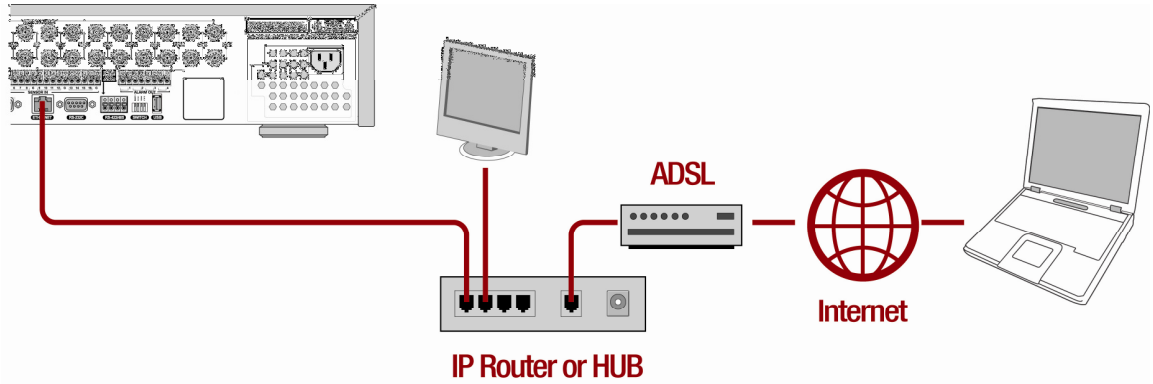
1. Run the pre-install the network client software on the supplied CD. (Refer to Chapter 6. Network access using the Exclusive network viewer)
2. Check the IP address from SETUP>SYSTEM>DESCRIPTION of DVR.
3. Run network client software and click button.



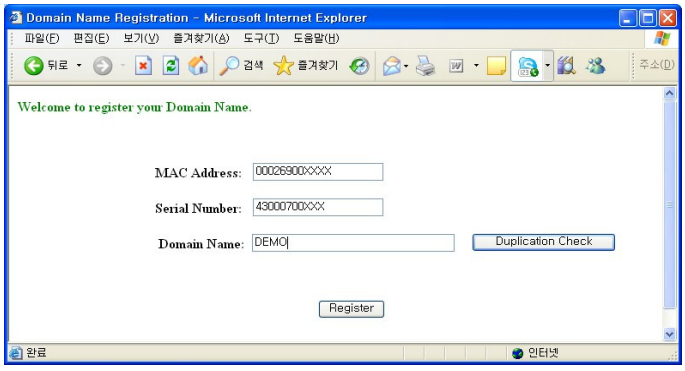
4. Input Site Name, Site Address(IP address), Port No., and Password on the connect window. And click OK. Then, press button after checking the left check box.

Internet (ADSL) Connection using DDNS

Connect to the system, using an Router or ADSL modem and an Ethernet cable (10BASE-T/100BASE-TX CAT 5 LAN cable)



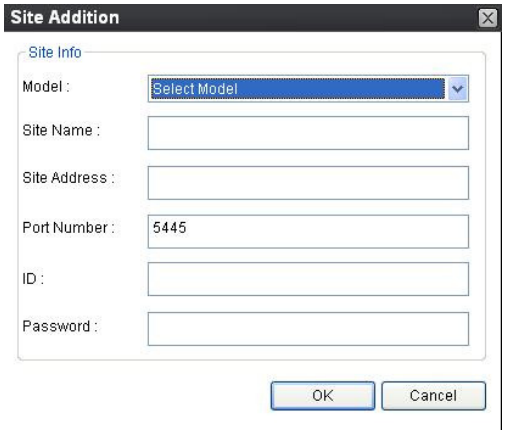
1. Go to SETUP>NETWORK. Set NETWORK TYPE as DHCP and DDNS SERVER as ON. And select one type among bestddns.com, okddns.com and ddnscenter.com after setting to DDNS1.
2. Go to Setup menu of Router and open TCP port 5445 and 80 using Port Forwarding. (Refer to A. How to set IP address of the DVR and open TCP port of the router?)
3. Confirm the Mac address and Serial No. from the label of the rear panel of the DVR.
4. Open the web browser and log on http://www.bestddns.com. Please log on http://www.okddns.com in Korea and http://www.ddnscenter.com in USA.



- MAC Address: Input the Mac address (EX. 0002690XXXXX) without any space.
- Serial Number: Input the Serial No. (EX. 43000700XXX.) without any space.

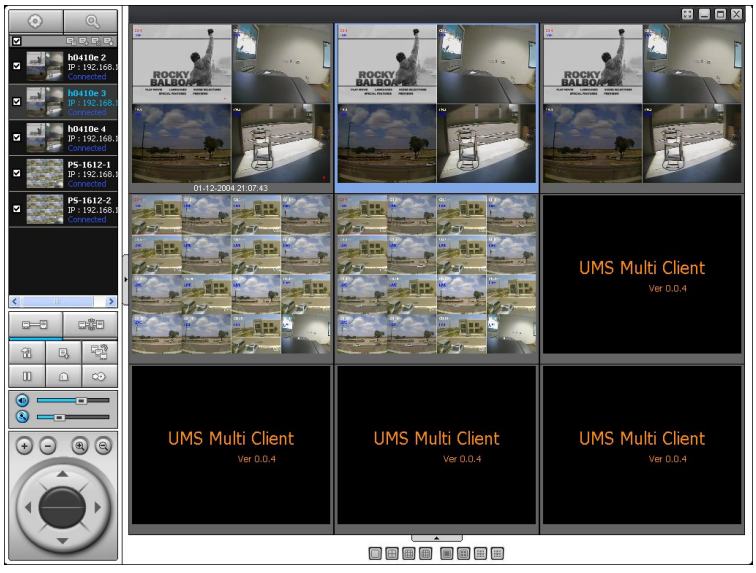
5. Domain Name: Input Domain Name for your DVR system
6. Click the DUPLICATION CHECK button to see if the domain name is available.
7. If you see the screen “You can use the Domain name you entered” then click RETURN and click REGISTER button to complete the registration.
8. Run the pre-install the network client software on the supplied CD. (Refer to Chapter 8. Network access using the Exclusive network viewer)

9. Click button and add the DVR as necessary.



- Model: Select one type surely among SDVR series, H DVR series DVR / N series DVR, HD DVR / IP Camera.
- Site Name: Input the name of the DVR.
- Site Address: Input the Domain Name that is registered on http://www.bestddns.com. Please log on http://www.okddns.com in Korea and http://www.ddnscenter.com in USA. (EX. XXXXX.bestddns.com)
- Port Number: Input the DVR port number.
- Password: Input the network password.

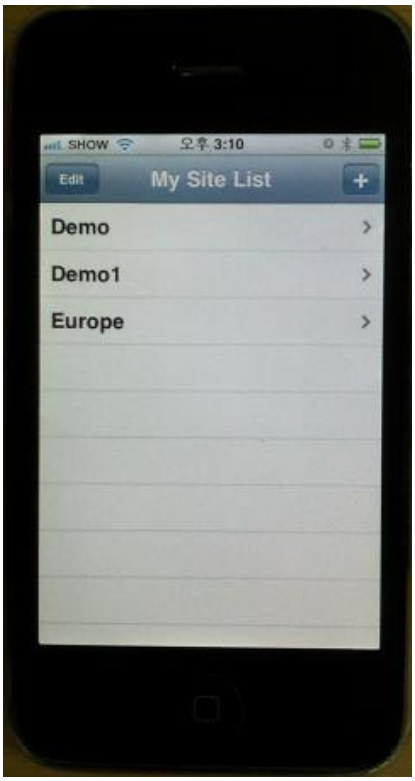
10. Press button after checking the left check box of the site that you will access.

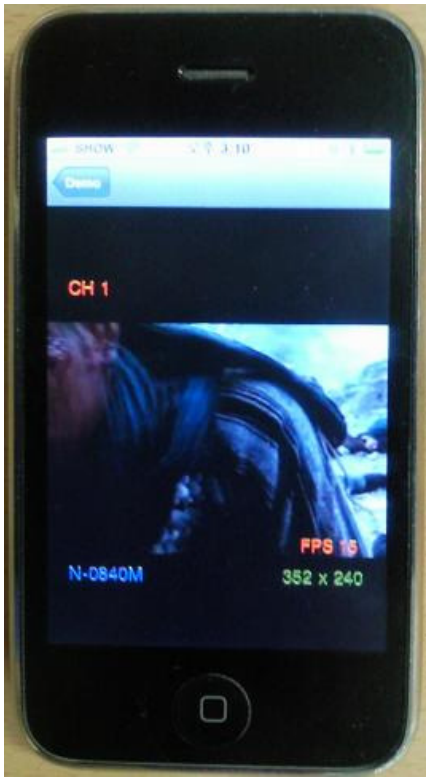


C. How to access DVR with iPhone?

1. Connect to App Store in iPhone and search “iUMS” to the search menu. Then, download the iUMS application.

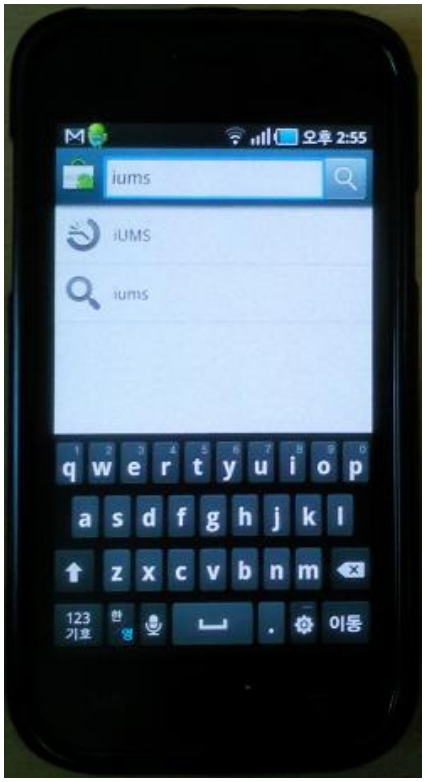
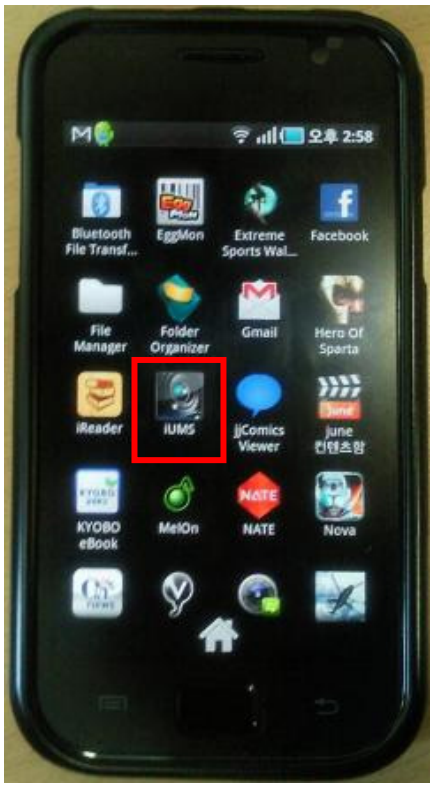
2. Register your DVR and input the IP address or domain name, ID and password. Then, press the specific channel. More functions such as PTZ, split screen, playback and etc will be supported to the next version.





D. How to access DVR with Android?

1. Connect to Market in Android and search “iUMS” to the search menu. Then, download the iUMS application.

2. Register your DVR and input the IP address or domain name, ID and password. Then, press the specific channel. More functions such as PTZ, split screen, playback and etc will be supported to the next version.